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Evidences of Growth In Visual Education

VISUAL education is taking a prominent place in the teaching and learning process, utilizing all available facilities for the enrichment of the experiences of children in the areas in which they are expected to learn. These claims are attested to by the facts that but a few years ago more than ten thousand 16-mm. projectors and five thousand 35-mm. projectors were owned by schools, and these figures have undoubtedly increased since then. Add to this the increase in film production by corporations, universities, and local boards of education and the growing emphasis upon educational pictures for commercial use, and it becomes apparent that visual aids are recognized as important teaching and learning techniques.

The contribution of visual aids lies in their unique relationships to areas of experience, individual differences in interests and needs, and to the various aims and objectives of instruction. For example, visual aids have made a distinct contribution to the development of deeper insights into personality adjustment and the fine arts and have enriched and broadened the scope of vocational possibilities for the high school student. There is also experimental evidence available to support the belief that increased pupil participation in the various areas of experience has been stimulated by visual aids resulting in greater and more sustained interest in the areas.

With the increased emphasis upon pupil growth through vicarious experience, and with an ever-increasing need for evidence of growths attained by pupils, the proper use of visual aids may be expected to bring new meanings and insights into the present curriculum, which still has too many barren areas and too few oases.

Just what factors should be considered in the proper use of visual materials is one of the chief aims of this symposium, and it is also one of the primary problems in education in general, since it deals directly with curriculum development.

SINCE there are some who register much contempt for mastery of subject matter as an end in itself, and in the same breath plead for functionality in curriculum development and classroom procedure, the responsibility for making the mastery of skills and knowledges functional rests with those same people. If through visual materials, used to supplement the experiences gained in the process of mastery of skills and knowledges, we can make a distinct contribution to functional learning, these visual aids will have rendered a much needed service and should receive more serious consideration.

Most of us have sensed the need for more specific evidences of growth, even those of us who have come to some common agreement as to what are some of the desirable growths to be attained on the various maturation levels—however, in the absence of measuring de-

vices other than objective tests it has been practically impossible for us to discover, to any degree of satisfaction, such evidences, although with the advent of tests of belief, interest, critical analysis, attitudes, et cetera, some light has filtered into our despair, and, whether consciously or unconsciously, some growths obviously have been stimulated even under the most traditional circumstances. Whatever factors may have contributed to functionality under any plan of teaching and learning, it becomes our primary challenge to discover some of these factors and study their nature and character so as to give them greater prominence in the learning process.

It is my firm conviction that when visual materials are utilized to enrich the experiences of children in a learning situation, any specific thing learned within a given situation in the light of a total situation will be clothed with deeper meaning and therefore will result in desirable growth.

Like every other innovation that found a place in the educational scheme, the visual aids have only potential value in and of themselves, and, like potential energy, no profitable effect can be produced either upon an object or an individual until this energy is released and directed into avenues of teaching and learning. It is indeed gratifying to know that much of this potential power has been intelligently directed through teacher-training programs in universities and through workshops in city and county school systems, so that the new tool of teaching and learning is being used with skill as well as with a fuller appreciation of its intrinsic worth.

THIS symposium is designed to clarify some of the misgivings and vague objectives held by some and will, I hope, widen the horizon of possibilities for use for many who may have questioned the merits of this technique. No symposium is completely fulfilling its purpose until the participants have received a generous reaction to the challenge presented by the readers. Why not send your reactions to the editor of the JOURNAL as soon as you have read the symposium offerings?—W. J. KLOPP, *associate editor; supervisor of secondary education, Long Beach Public Schools.*

For Sale

THE excellent symposium which was included in the last issue of the *Journal,* "Jobs for the Neglected Sixty Per Cent," has been reprinted as a pamphlet for sale by the California Society of Secondary Education. The Society anticipates that the symposium will be in considerable demand throughout the country for use in professional classes and for study by the teachers and administrators of various school systems. Single copies of the reprint will sell for 35 cents; in quantities of ten or more, copies will sell at 20 cents.

Reprints of the October symposium, "Personnel Work in California Public Junior Colleges," already have been practically sold out, but the Society still has a number of copies of the October magazine itself. A special price will be made on quantity orders of this issue.

The 1940–41 Directory

SOME copies of the 450-page 1940-41 edition of the *California School Directory* are still available in the offices of the California Society of Secondary Education. Like its predecessors the present edition lists all teachers and administrators in the public secondary schools of California, giving their teaching assignments and other related information.

Rôle of Visual Materials In Education

By EDGAR DALE

Dr. Dale's statement of the rôle which visual materials play in the educational process serves as an introduction to the current symposium and sets up certain guiding principles for an understanding of the articles which are to follow.

Dr. Dale, professor of education at Ohio State University, is an outstanding figure in the visual education field. As a member of Ohio State's Bureau of Educational Research, he has been particularly concerned with work in the field of curriculum and with investigations in the field of theatrical motion pictures. He is co-editor of "The News Letter," a pamphlet providing information to teachers about the radio, the press, and the motion picture, and he is author or co-author of four books dealing with the educational use of motion pictures. In 1937–38 he was president of the Department of Visual Instruction of the National Education Association, and during the present school year he has been directing the Traffic Safety Project sponsored by the Highway Education Board, in which project ten schools have participated to produce their own traffic safety films.

A GOOD deal of time and effort may be saved if those of us interested in visual materials put down on paper just what we believe concerning them—or, in other words, state the rôle of these visual materials in the educational process. This article is one attempt in this direction.

It is likely that my colleagues who are preparing this symposium with me will not accept my statement in all of its particulars. Nevertheless I believe that the general statements which I shall make will be acceptable. I say this because close acquaintanceship and coöperation with those working in the field indicate that these statements seem to include a common philosophy or outlook. I shall state these beliefs as a series of propositions and shall explain each one.

1. *The term "visual education" or "visual aids" if interpreted literally is a misnomer.* There is a visual sense, it is true, and this visual sense does play a very significant rôle in education. But we as teachers do not work with single senses. We work with experiences which are multi-sensual. The electric fan before me does offer visual stimulation, but I also hear the whir of its propellers and know from previous experience with it just how heavy it is. I know what will happen if my finger touches the whirring blades. The fan is smooth. This isn't merely a visual fact; it is a fact associated with touching and feeling objects made of this type of metal.

It would seem, therefore, that, while certainly we can distinguish visual stimuli from auditory or tactual, nevertheless in the multi-sensual experiences with which we are concerned in school the screening out of the variant sensual components of the experience is unimportant and useless. Wheeler and Perkins say on this point:

> The ear, alone, does not determine what the nature of an auditory experience will be. A field of experience and a total nervous system are necessary .... individuation never results in absolute segregation; .... there are no discrete sense departments. .... The meaning of an object will not be apprehended until it is

perceived in the light of a total situation with the aid of other senses.[1]

Teachers are concerned basically with total situations, with experiences, not with individual senses.

2. *A much larger proportion of school experiences than we may be willing to admit is barren, sterile, and verbalistic.* This is true for two reasons. First, because many of the experiences which we introduce within the school have little relationship with pupils' lives, either because the experiences are introduced too early or too late, or because under any circumstances they have very little tie-in with what boys and girls are thinking, doing, and feeling. Second, because the verbalistic skill of teachers and their school ability—which are superior when compared with the average level of the population—enables them to generalize more quickly and to see relationships more skillfully than the average person.

As a consequence, teachers are willing to accept verbalistic student recitations and explanations which really may not be understood by children. We know that pupils can name a group of ex-

[1] Raymond H. Wheeler and Francis T. Perkins, *Principles of Mental Development*, Thomas Y. Crowell Company, 1932; pp. 140-147.

The symposium, "A Practical Approach to the Provision of Visual Aids," is the first of three related symposia to appear in the "Journal" during 1941. In treating as it does the whole area of visual instruction, it considers in general terms a limited field which is to be given special attention at a later date, the motion picture in education. And in grouping, as it does in places, visual with audio aids, it likewise approaches the field of the third symposium, a treatment limited to the radio and other related audio aids. Together the three symposia will give a thorough treatment of audio-visual instruction in secondary schools. As in the articles of the present number, the emphasis throughout the later contributions will be on suggestions of practical means for implementing the principles which long have been given our lip service. If there is sufficient interest to warrant it, the three symposia at a later date may be reprinted in combined form as a small pamphlet.

Dr. Edgar Dale of Ohio State University, who helped plan the symposium, writes the lead article. Next, Gardner Hart, supervisor of audio-visual education in Oakland, tells of the types of visual and audio aids which are being made available in fields of the curriculum which previously have been neglected. Howard C. Walters of Santa Barbara High School and Francis W. Noel, visual education director of Santa Barbara, describe how visual material may be used in connection with a specific social science unit.

Miss Bess Landfear, of the San Francisco Bureau of Texts and Libraries, discusses the place of the librarian in a visual education program; and Miss Marion Israel, course-of-study assistant in Los Angeles County Schools, tells of the sources where teachers can go for visual materials. Miss Lillian A. Lamoreaux, director of curriculum and instruction in the Santa Barbara schools, discusses the use of motion pictures as a curriculum aid.

Ventura County's program for pooling the resources of an entire county as a means of providing adequate visual materials for its small schools is described by Miss Persis Hamilton, county director of rural education. Dr. H. M. McPherson, district superintendent of Napa Union High School, makes certain recommendations in regard to a proposed visual program for the State of California, based on the study which he made under the auspices of the Association of California Secondary School Principals.

Dr. W. J. Klopp, supervisor of secondary education in Long Beach, writes the introductory editorial.

plorers but may not know what an explorer is. They may speak and write with facility the definition of oxidation, yet fail to know ordinary examples of oxidation which lie all about them. They may even memorize complicated formulae in the field of physics and yet may not be very certain whether they fall forward or backward when a streetcar moving forward suddenly stops. They have studied about the moon and the stars and planets in books, but I have never yet found a majority of a class of graduate students in several different universities who clearly understood the phases of the moon or who could go to the board and fill in a half moon, which one would see just before the sun went down in the evening.

Two evils result from this barren, mechanistic, and sterile treatment of factual information. The first is overemphasis on the typical recitation lesson in our high schools. The second is the tremendous amount of forgetting.

Briggs reported from the observation of 104 classrooms, each chosen by a principal as exemplifying the best teaching in his school, that "about 65 per cent of the classes used the conventional procedures of questions by the teacher on an assignment with answers by the pupils or on specific direction followed by board or seat work."[2] If "excellent" teachers are using these methods, we may be sure that poor teachers are using them as well.

The studies of Ralph W. Tyler and others have shown high amounts of forgetting of factual materials after a period of time has elapsed. This forgetting is much greater with vocabulary items, discrete data, than it is with principles and generalizations. While certain forgetting is normal and desirable, nevertheless the forgetting of materials taught to be remembered represents an important educational problem.

3. *Teachers of the past were skilled in handling words. The teachers of the future must be skilled in handling experiences.* This is a glittering generality. What does it mean? Teachers in the past have been trained to use textbooks and reading material. These textbooks and reading materials, generally speaking, are easily adapted to reading and reciting methods. They are divided into chapters, divisions, and the like. One can get a grip on them. They can be assigned, tested upon. But an experience, such as a field trip or a motion picture or a demonstration, is not so easily handled. It has scores and dozens of aspects, leads.

Teachers, therefore, must see much more clearly than before what it is they are driving at. They must have a better concept of the principles they are trying to develop, and they must see much more clearly the rôle of active experience in developing these generalizations. It would be relatively easy, for example, for a teacher of the fourth grade to have children memorize the terms *herbivorous, carnivorous,* and *omnivorous.* A perfect examination could be passed upon these facts. Yet I am convinced that unless children were actually given an opportunity either directly or indirectly to have rich experiences with animals, to know their feeding habits, and the like, such information at the outset would not be functional and, second, would be quickly forgotten.

4. *Experiences are found at varying levels of generality and abstraction.* A child, for example, may have experience with Rover and yet have no general concept of a dog. After a while, however, when he sees all kinds of dogs, he realizes that Rover belongs to a class. We would think an 8-year-old child a dolt if he couldn't tell the difference between a dog and a horse, even from

[2] Thomas H. Briggs, "The Practices of Best High School Teachers," *The School Review,* 43: 745-752, December, 1935.

crude drawings. But he knows this fact perfectly well because he has had rich and varied experiences in these areas.

He is still likely, however, to call a whale a fish. Indeed, the German name for whale is *walfisch*. But if he is a biologist, or thinks scientifically, he will call a whale a mammal, and if he has had enough experience with what has been called mammalian, he never forgets it.

The fact that experiences exist on different levels of abstractness is, I believe, a very important concept in the whole field of visual education. We need to see that experiences can exist in the full-bodied sense, that we meet them directly as when we take a field trip, or that we meet them much more indirectly, *i. e.*, symbolically. Teachers must understand that thinking is a process of rehearsing in symbolic fashion the actions that would otherwise have to be acted out overtly. Einstein thought out symbolically with paper and pencil and mathematical symbols a theory of relativity. This theory was then checked concretely by observation of astronomical phenomena.

Language, whether it is heard or read, serves this symbolic purpose. Words, of course, may not have a concrete reference. They may express a relationship. This relational aspect of language is often forgotten by persons interested in visual education. You cannot draw a picture of *and, but, for, however*. Indeed, such words as *niece, husband, father, mother* have a spurious concreteness. Younger children have difficulty in understanding such concepts as these. It is this progressive level of symbolism in experience that teachers need to understand because, if they fail to understand it, very frequently they will permit the child to offer a verbal substitute for an experience that he actually doesn't possess. Hence, in the field of arithmetic children discuss *bonds, stocks, savings accounts,* and the like when many of them lack any direct experience with these concepts.

5. *Just as it is possible to move too quickly to generalization and abstraction, so too is it possible to stay too long at concrete levels.* Dewey has pointed out that:

> While direct impression has the advantage of being first hand, it also has the disadvantage of being limited in range. Direct acquaintance with the natural surroundings of the home environment, as a means of making real ideas about portions of the earth beyond the reach of the senses and as a means of arousing intellectual curiosity, is one thing. As an end-all and be-all of geographical knowledge it is fatally restricted. . . . . Just as the race developed especial symbols as tools of calculation and mathematical reasonings, because the use of the fingers as numerical symbols got in the way, so the individual must progress from concrete to abstract symbols—that is, symbols whose meaning is realized only through conceptual thinking.[3]

One basic danger confronts a world in which the indirect experiences of individuals are sharply increased by means of communication devices such as radio, movies, and the press. It is the hazard that as life is lived increasingly on a vicarious, indirect level, the symbol may be substituted for the experience of which it is merely a sign. We may see life only through the eye of the camera, hear through the voice of the radio, interpret life primarily through the mind of the editorial writer or reporter. We may live our lives by proxy—seated in a comfortable chair, listening to, looking at, reading about the experiences of others.

William James has made a famous distinction between "knowledge by acquaintance" and "knowledge by description." The former is largely non-inferential, the latter, inferential; or as explained by Josiah Royce:

> A deaf man who has learned about the nature of music through other people, in so far as they can tell him about it, but who has

[3] John Dewey, *Democracy and Education*, The Macmillan Company, 1916; pp. 315-316.

never heard music, has no "knowledge by acquaintance," but is limited to "knowledge about." "Knowledge by acquaintance" is also sometimes called "immediate knowledge."[4]

Teachers must not forget that there is a satisfaction and a pleasure in sensual data which is extremely significant. I was struck by this fact in the answers to a simple question which Edward Vernon, writing in the *British Weekly*, asked children to prepare. "What are the loveliest things you know, persons not counted?" Here are some of these children's answers:

A girl's:

The scrunch of dry leaves when you walk through them.
Cool wind on a hot day.
The feel of clean clothes.
Climbing up hill and looking down.
Hot-water bottle in bed.

Another girl's:

Our dog's eyes.
Street lights on the river.
The smell of rain.
An organ playing.
Red roofs in trees.
Smoke rising.
Rain on your cheeks.
The smell of new-mown hay.
Red velvet.
The moon in clouds.

A boy's:

The feel of running.
Looking into deep clear water.
The taste of strawberries.
A swallow flying.
Water being cut at the bow of a boat.
A mounted policeman's horse.
An express train rushing.
A builder's crane lifting something heavy.
The feel of a dive.
A thrush singing.

[4] Josiah Royce, "Mind," in Hastings' *Encyclopedia of Religions and Ethics*, Scribner's Sons.

THE school of the future will be characterized by greater opportunities for richer learning experiences. Instead of placing dependence merely upon reading and then, unfortunately, primarily on textbook reading, we shall make use of field trips, dramatization, demonstration, models, specimens, museums, sound and silent movies, stereoscopic still and motion pictures, flat photographs, glass and film slides (especially the 2 x 2 slide), charts, maps, globes, and recordings.

Our present dearth of learning materials makes it impossible to make adequate provision for those children who do not learn easily through reading methods, but this will be remedied. Further, by providing a greater variety of learnings we shall get a reinforcement of learning that is not now secured. In a good deal of our teaching not quite enough experience is provided the average child to get him "over the hump" as far as learning is concerned. By offering a richer bill of fare in cafeteria style, we may be able to develop learners out of children who do not thrive on current educational materials.

The term "visual aids" or "visual materials" may not be adequate to symbolize this richer body of experiential materials. If the term finally does prove inadequate, certainly it will have ably served during the interim period to remind all of us that the school can now provide much richer, more adequate learning materials, and that there is no time like the present to begin providing them.

Nation Has Million Teachers

There are approximately 1,073,000 teachers in all types of schools, both public and private and from kindergarten through college, in the United States. The United States Office of Education points out that from 1930 to 1936 the number of teaching positions in the country increased 1.5 per cent, while the number of pupils in average daily attendance increased 4.9 per cent. Since 1900 the number of teachers throughout the nation has practically doubled.

Of the 1,073,000 teachers, about 266,000 are men. From 1930 to 1936 the proportion of men teachers increased from 16.6 per cent to 20.6 per cent.

Audio-Visual Materials in Modern Instruction

By GARDNER L. HART

In this article Mr. Hart discusses specific audio-visual materials which can be used to advantage in the modern curriculum. Since the teachers of literature and foreign languages have not had available in the past as many audio-visual aids as have other instructors, he gives particular attention to recent developments in these fields.

Mr. Hart is supervisor of audio-visual education in the Visual Department of the Oakland Public Schools, which position he has held for eleven years. Prior to coming to Oakland in 1929, he was assistant director of the Visual Education Department of the San Diego Public Schools. At the present time he is chairman of a committee asked by State Superintendent Walter F. Dexter to report on the function of a state division of visual instruction.

MANY teachers think of the motion-picture films and slides which are used in social studies and in science classes as being *visual education,* but few realize the tremendous possibilities for visual aid in other fields of the curriculum or remember that visual appeal can be made in other forms than as a film. As a matter of fact the schools have not kept pace in the use of visual aids with industry. Commercial firms have been quick to realize the tremendous benefits derived from presenting their materials visually. Not only do they create many of our wants and desires through the use of visual sensations and make many sales as a direct result of these presentations, but also, actually, many large firms are training their employees by using the same types of visual-auditory aids that are available for use in modern educational classrooms. Teachers would be wise to evaluate some of these commercial training programs and in turn see how similar methods may be used in modern instruction in the schools.

It is true that in the early days visual materials were used a great deal more in science and social studies than in other fields, but those days have long since passed. Now materials are available in practically every subject in a modern school curriculum.

In high school mathematics, stereographs which have the third dimension are being used in the study of solid geometry. Always before there have been some students who were unable to see the third dimension in solid geometry figures printed on a flat page in a textbook. After a student has once seen the figures in third dimension, however, the drawings in his textbook have the apparent depth which he was unable to see before. Visual materials are being used also in many other phases of the study of mathematics.

In clothing classes, visual materials are now available to assist the teacher in making this subject more vital and interesting. Through motion pictures, classes may be shown not only the manufacturing processes of such new materials as rayon and nylon, but also the care and use of the fabrics as well. Many sound filmstrips are also available in this field. These sound filmstrips are a series of carefully selected

photographs printed on 35-millimeter film. Accompanying this film is a phonograph record on which is recorded the material which should be presented with each picture. A chime is rung each time a new picture should be shown on the screen. The length of this film varies from fifteen minutes to half an hour. These projected pictures, accompanied by descriptive dialogue and interesting sound effects, make a very dramatic appeal to the student.

Another type of visual aid which can be provided for sewing classes consists of sample swatches of materials secured from the various manufacturers. These samples give the clothing student first-hand information as to the appearance, texture, and feel of fabrics.

Styles and design of millinery and clothing may be illustrated by pictures cut from magazines and papers and projected on a screen in the classroom by use of an opaque projector. Students, as well as teachers, can make drawings on cellophane, slide glass, or ground etched glass, which, when projected by a lantern slide projector, serve as a basis for a fine class discussion.

New motion picture films have been developed for use in the field of art. These include lessons in techniques of layout and design, application of color, and use of the brush. Others show work in plastics, metals, and ceramics. Through the use of these films—supplemented by classroom discussions, demonstrations, and actual work—the student easily develops interests and appreciation which, without these materials, the instructor often finds difficulty in arousing.

THERE has been a growing need for audio-visual aids in the fields of literature and foreign languages, and recently some materials of this nature have begun to appear. Shakespeare has been studied in secondary school literature for years, but it is now possible for the teacher to motivate the study by using a series of especially prepared phonograph records and illustrated texts. When teaching *Twelfth Night, The Merchant of Venice,* and other Shakespearean plays, the teacher may now use textbooks which are illustrated by small pictures and drawings printed on the margin of each page. These illustrations give the student additional information which is closely related to that part of the text. The costumes worn by the players, diagrams of the stage, properties, and scenery can thus be shown. When in the course of class discussion of a play it becomes time for the class to refer to the text, the new aids in this field make it possible for the teacher to place a record on a phonograph on which is recorded the dialogue, given exactly as it is printed in the book. Thus, while the student reads the printed words, he hears the play given by a group of outstanding players who are able to portray the text in a very dramatic fashion.

During the past few months, tremendous progress has been made in the preparation of materials for English and language arts classes—for years there has been a great deal of demand for such material, but very little has been available. Publishers of foreign language books now are offering a series of phonograph records to assist in the presentation of this material. These phonograph records give the correct pronunciation and vocabulary of certain sections of the book as it is presented in the text. Other records present songs, the words of which are also included in the book. Through these records, the foreign language student has an opportunity of hearing

the language spoken as he reads the printed word in the book. Other records are available to give the students a musical background of the country which they are studying. Folk songs, popular music, and operas all play their part in making the study of foreign languages more interesting. Songs sung by native artists such as Schipa, Gigli, Lily Pons, and others may also be effectively used.

Lantern slides may supplement the text and records by giving the foreign language students general information regarding the country they are studying, the people, and their ways of living. In the study of French, for instance, charts and photographs are available showing the costumes of the people, the cities, the types of industries, and how the people live and work. When lantern slides are being used, the teacher has a fine opportunity to discuss various topics with the class in the native language. Through the use of this material it is possible to develop conversation.

Models, either made by students or secured from visual departments, also play their part in the study of languages. Models of such objects as a Roman house, a chariot, a galley, and those picturing costumes appeal to the student. If the information regarding these models is written in the language, students are eager to read the printed material to secure information about the objects.

Charts and wallpanels which may be hung in the room, although they may have no direct bearing on the subject being studied, are of value as background material. Unconsciously, students will look at these pictures and read the descriptions which accompany them. Through the charts, the students may get a fine idea of how people lived during early times. This is especially significant in the study of either Greek or Latin. These charts portray such material as Roman architecture, homes, coins, costumes, and early maps.

MANY teachers are capitalizing on the student's interest in radio by presenting small radio broadcasts in the classroom. The scripts for these broadcasts are prepared by the class, and portable public address systems with detachable speakers are used. The microphone is placed in one room and the loudspeaker in the room where the class is present. To vary such a program, it is possible to work in musical backgrounds and sound effects. If a public address system is not available, a microphone, which can be made in a shop, will give the effect of a radio broadcasting room.

It is also possible to procure an oscillator, which is a miniature portable broadcasting station, so that these broadcasts actually can be put on the air. The oscillator is a device which will broadcast any program with musical and sound effects and is as simple to operate as a phonograph or public address system. The program presented through the oscillator may be picked up on any radio within a radius of 200 feet. Thus, any class in the school may listen to the broadcast by merely tuning its classroom radio to the frequency of the oscillator.

Tremendous strides have been made in the field of educational electrical transcriptions. Through the development of radio programs and the making of these programs into electrical transcriptions, it is now possible for a teacher to present this material as instructional units in her class. The electrical transcription is a new type of phonograph record. It is much larger than the standard phonograph record. On each side of each record is recorded a fifteen-minute program. The records are six-

teen inches in diameter and must be played on a special machine, as they revolve at 33⅓ revolutions per minute, in place of 78 revolutions per minute, which is the standard phonograph speed. These transcriptions are the same type of records as those used by radio stations and are now available at a very nominal cost in the fields of French, German, Italian, and other foreign subjects.

In using these electrical transcriptions, it is advisable for the teacher to play through the record before presenting it to the class, for a tremendous amount of material is presented in each one of these fifteen-minute programs. While the teacher is reviewing the record, she should set up certain specific problems for the student. After the program has been played for the class, a discussion should follow immediately, the teacher making sure that the information presented has been thoroughly understood by the class.

There are also many electrical transcriptions available in the field of literature. Dramatizations of interesting incidents in the lives of such men as Mark Twain, Oliver Wendell Holmes, and Charles Dickens can now be secured. These transcriptions can be supplemented by a series of phonograph records of prose and poetry, oftentimes read by the author himself.

Before the phonograph records or transcriptions have been presented, it is sometimes advisable for the students to have some interesting facts about the person being studied. Through lantern slides, students may review highlights of the lives of some of our famous authors. Lantern slides may also be used to illustrate some of the works of these men. Other types of visual materials, such as film slides and photographs, may also be utilized in these studies.

THROUGH the use of audio-visual materials, the study of languages and literature becomes one of the most interesting fields in the curriculum. Modern teachers no longer need to be concerned with where to find visual-auditory material in order to make their lessons more effective. The problem today is for the teacher to evaluate the tremendous amount of material available and to decide which type can best be utilized for the particular lesson she wishes to present.

Los Angeles Defense Program Gets Coördinator

The presence of a coördinator for the vocational defense training program in Los Angeles County has been made possible through the coöperation of Dr. Walter F. Dexter, state superintendent of public instruction, and J. C. Beswick, chief of the Bureau of Trade and Industrial Education. To fill this position Homer D. Fetty, formerly director of the Division of Vocational Education of the Burbank City Schools, has been appointed. He began his duties on January 2, 1941.

In addition to his responsibility for the necessary coördination of county activities in the vocational training program for national defense, Mr. Fetty will be available to assist schools in such matters as the organization of advisory committees, the proper completion of required reports, the procurement of equipment, the selection of qualified trade teachers, the development of appropriate course of study, and the placement of trainees.

Mr. Fetty will work through the Division of Secondary Education of the County Office.

Using Visual Aids in a Social Science Unit

By HOWARD C. WALTERS
FRANCIS W. NOEL

This article serves to illustrate the use of visual aids by showing the materials that will be selected and used in connection with a particular unit in the social science field. In so doing, it performs a service that is distinct and real, for it discusses visual aids in terms of the desired outcomes of a specific unit of instruction and thus gives us a practical exposition of the use of these materials in an actual classroom situation.

By virtue of their positions, the co-authors are well fitted to prepare such an article, for the one brings to us the point of view of the social studies teacher, and the other gives us the point of view of the specialist in visual education. Mr. Walters is a social science instructor in the Santa Barbara High School, and Mr. Noel is visual education director for the Santa Barbara schools.

THE primary purpose of this article is to suggest briefly, through analysis of a teacher's problem, a procedure for selecting and using various visual materials to meet the curricular objectives of a particular social science unit of work on the secondary level. Before proceeding directly to an analysis of the problem, a number of over-all factors in the use of those materials should be understood.

The ultimate effectiveness of visual aids to the learning process is largely proportionate to the time and study given to the careful selection, skillful use, and consistent evaluation of such teaching tools. The educational use of the motion picture is comparatively novel and has been largely exploited by the theatrical interests. Because of this, many are prone to think of the movie as a mass educational tool producing magical results with little or no effort on the part of the teacher. Experience definitely shows the contrary to be the case. The motion picture, like other visual aids, is a classroom teaching tool requiring, for effective and good use, proper selection and adequate teacher and student preparation, as well as a whole series of other definite considerations. Foremost among these latter is the necessity of relegating to unobtrusiveness the novelty of the tool, the equipment used in its presentation, and the changed environmental situation. To constrain the motion picture to this matter-of-fact position in the learning situation is not easily done, but to do so is essential if good results are to be consistently obtained.

A second factor, peculiarly pertinent to the use of motion picture material, is the absolute necessity of first-hand knowledge of the film and the counsel of one whose educational business it is to be cognizant of the material presented in the pictures as well to have an understanding of the techniques of use and curricular possibilities of the film. Such a person working in close correlation with the curriculum department of a school is in a position to give invaluable service to teachers. This position in a single school can be fulfilled by a visual education coördinator—in a system by a visual education director.

HOW can the social studies teacher use visual aids most effectively in presenting a unit on "The Development

of Transportation and Communication in the United States?" What shall be the purpose of visual aids in the teaching of such a unit on the secondary level? What materials shall be used and how can they be used to most advantage?

We can best proceed to answer some of these questions if we first outline the desired outcomes of the unit in terms of student behavior. What understandings, attitudes, and appreciations do we wish to achieve? These may be listed as follows:

1. The student should develop through the study of this unit a better understanding of the tremendous dependence of man upon his available transportation and communication devices.

2. He should complete such a unit with added knowledge concerning the evolution of the modern American methods of transportation and communication, which knowledge he should be able and willing to apply to present-day problems.

3. He should have developed increased concern over the problems associated with efforts to maintain a high degree of social service in the control and operation of our nation's transportation and communication utilities. This is perhaps the strongest outcome to be desired from such a unit on the secondary level, as it may be the last opportunity of the school to modify student attitudes in regard to their responsibilities for maintaining and extending the basic values of the democratic way of living together. If a student truly understands the extent of our dependence upon the available transportation and communication agencies, he cannot fail to appreciate the need for some kind of governmental regulation to protect the social welfare.

4. He should have developed a deeper appreciation for the courage, daring, foresight, and inventive genius of the men who have and who are making our modern means of transportation and communication possible.

THE selection of materials to meet a specific problem must be based upon that which is available from the source or sources serving a school. Special circumstances may permit or necessitate calling upon remote service agencies, but the average teacher in most situations must confine her selection of materials to those offered from the school central visual aids department or from the community within which she is working. If the visual education department is functioning properly and is supported properly, such material should be available—departmental offerings having been built on the basis of an analysis of curricular need.

For initiating this particular unit, the use of the Erpi film, "Development of Transportation," will give an over-all view of the problem. This film is ideally suited for the purpose. Its use can lay the foundation for specific work and further research dealing with every problem which can lead out of a study of transportation.

Tieing the study into the immediate community, a directed excursion to the local airport, bus or railroad station, telephone exchange, newspaper plant, or places of similar character has many possibilities. Such excursions to result in fruitful experiences in terms of the objectives of the unit must be well planned by both students and teachers.[1]

The use of well-chosen models, including various boats depicting the development of water transportation, a pioneer wagon, an early model train, and other materials of this type as well as communication objects and models, can lead to discussions and research developing a deep appreciation of the great changes which have taken place in our modes of travel and communication and the resulting problems arising through their use.

There are numerous lantern slides and still films dealing with this subject. The Society for Visual Education has a splendid series on transportation and

[1] For detailed information useful in planning excursions, it is suggested the reader refer to *Newer Instructional Practices of Promise*, twelfth yearbook, Department of Supervisors and Directors of Instruction, N. E. A., p. 284-286.

communication. The Keystone Slide Company also has a number of sets dealing with these areas.

Well-chosen wall pictures dealing with the subject can further establish an environmental atmosphere in the classroom highly stimulating in the direction of the unit subject matter.

Numerous other motion pictures, chosen from the University of California or other film lists, particularly applicable to this study might include: *Airliner, History of Aviation, King of the Rails, Maintenance of Roads, Steam Power, Ties of Steel, The Boone Trail, The Automobile, Communication by Electricity, Wizardry of Wireless,* and *Thomas A. Edison.* Most of these films, it will be noted, deal with transportation; there is a decided lack of adequate educational motion pictures dealing with communication. There is also a lack of motion picture material having a direct bearing on governmental problems arising through the use of modern transportation and communication devices.

IN using the materials suggested, it must be understood that such use does not replace the customary research and reading necessary in social science secondary courses. If the materials suggested are properly used, the teacher will find a greatly stimulated interest in further work on the part of the student. It is this "spring board," interest-creating characteristic of these materials which makes them so valuable.

With careful selection and skillful use, the alert teacher will find these modern instructional tools of inestimable value in their contribution to effective teaching.

New Books Received

Among the new books and pamphlets recently received in the JOURNAL office from the publishers are the following:

The Secondary School, by Charles Watters Odell. The Garrard Press, Champaign, Illinois, 1939. Price, $3.00; 606 pages.

Selected Items for the Testing of Study Skills, by Horace T. Morse and George H. McCune. Bulletin No. 15, the National Council for the Social Studies, 1201 Sixteenth Street, N. W., Washington, D. C., 1940. Price, 50 cents; 72 pages.

Speech Guide for Listeners and Speakers, by Harlen M. Adams. Stanford University Press, 1940. Price, 90 cents.

Spotlight on the Balkans, by P. S. Stoyan. Foreign Policy Association, 8 West Fortieth Street, New York, 1940. Price, 25 cents; 96 pages.

The Training of Mathematics Teachers for Secondary Schools in England and Wales and in the United States, by Ivan Stewart Turner. Fourteenth yearbook of the National Council of Teachers of Mathematics, Bureau of Publications, Teachers College, Columbia University, 1939. Price, $1.75; 231 pages.

Trends in Student Personnel Work, by Sarah M. Sturtevant, Ruth Strang, and Margaret McKim. Contributions to Education, No. 787, Bureau of Publications, Teachers College, Columbia University, 1940. Price, $1.85; 110 pages.

Trozos De La Historia Del Sudoeste, by Harry C. Theobald. Silver Burdett Company, 1940. Price, $1.24; 201 pages.

Understanding American Business, by Humphrey B. Neill and Howard M. Cool. The Macmillan Company, 1939. Price, $1.92; 448 pages.

What the High School Ought to Teach, by Ben G. Graham *et al.* American Council on Education, 744 Jackson Place, Washington, D. C., 1940; 36 pages.

Word Wealth, by Ward S. Miller. Henry Holt and Company, 1939. Price, $1.20; 344 pages.

Workbook for Macmillan Handbook of English, by John M. Kierzek. The Macmillan Company, 1939. Price, 60 cents; 121 pages.

Place of the Librarian in the Visual Program

By BESS LANDFEAR

Almost any school which makes use of visual aids will find that the librarian has a most important part to play in the program. Just how important this part is can be seen from this article by Miss Landfear, which sketches the various means by which the librarian can help in the preparation, filing, and utilization of visual materials.

Miss Landfear is a librarian in the Bureau of Texts and Libraries of the San Francisco Public Schools. Her work in the Bureau is with visual aids.

THE librarian's place in the visual aids program, if it is conceded that the librarian has a place in it, is exactly parallel with her place in the reading program of the school. For her to function efficiently in the one entails exactly the same qualifications in knowledge, sympathy, and ideals of service as are required for the other. The librarian must know the course of study in each subject field, know how the units of work are developed by individual teachers, and have the confidence of the teachers in her ability to understand their needs and to produce results. She must likewise know the administrative set-up in her school, the goal toward which it is working, and the methods by which it expects to attain the desired results.

Granted that the librarian has these qualifications, she is ready to build up visual materials which teachers will use and which will help the administrative officers carry through their plans. Because of her central position she can be the integrating agent between departments.

THE still picture collection will be the librarian's easiest and most obvious first step. It is inexpensive (in money) to build up, and it can be housed economically from the point of view of both space and money.

The first step in building up a live, working picture collection is the checking of past requests and the obtaining of suggestions from teachers in regard to various units of study.

At first the materials may not be at all related in subject. For example, the school is working toward a flower show, with art, home economics, and science departments assisting. The show is a school activity, outgrowth of an expressed interest on the part of the students. To every homeroom, for every student, go mimeographed sheets, outlining the personal study which might be made of the subject. The library has books and magazine articles ready for tray service from room to room. And with portfolios of pictures in color showing suggestive flower arrangements, the demonstration can be made more effective, more concrete. The librarian can collect from magazines pictures which will be illustrative. As it happens, the little Coca Cola book of flower arrangements, at 10 cents, makes an ideal start for a portfolio.

The librarian has had an exhibit (somewhat as a guessing game) of personalities of the day. A teacher remarks, "I wish you would mount those so I may use them in my social studies

classes as flash cards." Another portfolio is born.

A teacher of mathematics comes in, asking for pictures illustrative of geometric forms in nature. The library sets to work on the problem, using discarded books, nature magazines, *National Geographic,* colored advertisements from magazines, and other sources.

To accompany the school text in geography portfolios of pictures covering the countries concerned are gratefully used. *National Geographic* magazine pictures make an excellent basic selection.

An English teacher who finds Whittier's "Snowbound" a little difficult for her California audience to appreciate would like a portfolio, not only of Whittier, his home, and so forth, but including pictures illustrative of the spirit of the poem—New England winter scenes, snow crystals, whatever imagination might dictate.

From such scattered requests, answered, come demands which scarcely can be met. In time, various units are covered by this type of material.

The question arises, of course, as to the sources of such materials, the care and housing of a picture collection. *Fugitive Material for Teaching,* by Helen Price,[1] has offered the most inexpensive and satisfactory method for care and housing. The No. 60 chipboard which the author suggests for use in mountings is the cheapest medium which will hold up over a period of time with hard usage. Pictures mounted on chip will stand in the chalk trays, and the colored mat adds artistic value to the picture. Other than the regulation picture file cabinet, she recommends beer boxes; University High School, Oakland, uses these, and the Newark, New Jersey, public library has similar boxes. Boxes take up space, however, and I have found most economical in this regard portfolios for separate units —with a cabinet for miscellaneous pictures. These portfolios can be housed in a case which the school woodshop can produce easily—a satisfactory case is 6 feet in height with horizontal shelves 14 x 10 inches, spaced far enough apart for each shelf to accommodate a separate portfolio.

Various authorities offer their own methods of mounting. The difficulty with the method suggested by Dent in his *Audio-Visual Handbook*[2] is the time element. The librarian, or teacher, has no time to wait while rubber cement dries, nor is there space to lay out the drying pictures. If chip is used, and that is cheapest, a picture mounted without a mat is most unappetizing. If other mount is used the expense is prohibitive. Anna Dorris[3] suggests use of Cadmus or Buckeye cover paper, either of which is too expensive for a growing collection.

Pictures must be filed under suitable headings. The librarian probably will wish to use the *Readers' Guide to Periodical Literature* as a guide to placing her pamphlet, magazine, and picture material under uniform subjects. Department heads, or the teachers concerned, should receive from the library information as to what portfolios are available for their units in the course of study.

As for sources of materials, it is the abundance which dismays the inexperienced librarian. To save the important and weed out the nonessential requires a flair, an intuitive feeling for the wants of her teacher folk, or keenly interested study.

Magazine advertisements are a useful source of pictures and cost nothing. The best commercial artists in the country produce the advertising pictures in

1 Reprinted from the *University High School Journal,* 8:85-96, July, 1928.

2 Ellsworth C. Dent, Society for Visual Education, Chicago, n.d.

3 *Visual Instruction in the Public Schools,* Ginn and Company, 1928.

the *Saturday Evening Post,* for example. There is scarcely an issue of this which does not yield at least one or two excellent colored pictures. Some advertisers run whole series, which when completed are not only beautiful but valuable and unobtainable elsewhere. Such magazines as *Vogue* and *Esquire* often carry the same series and they use better paper, with correspondingly better printing results. *National Geographic* magazine is the best single source of geographic material and also furnishes valuable collections of pictures of animal and plant life. For mounting purposes it is necessary to have two copies of each article used, but many old issues can be bought for 5 cents each.

The still photographs enlarged from moving picture films for publicity purposes are very valuable in some cases, especially in historical films, such as *Covered Wagon* and *Wells Fargo.*

Suggestive sources for picture material are offered in such books as Dana's Picture Collection,[4] Townsend's *Audio-Visual Aids for Teachers,*[5] Wheeler's *Illustrative Material for Junior and Senior High School Literature,*[6] the Woodring *Enriched Teaching Series,*[7] and Dent's *Audio-Visual Handbook.*[8]

THE librarian is the distributing agent for maps. It is her function to have an up-to-date file of source material on maps, to be enough informed so that when she attends the department committee meetings for consideration of map purchase she can be an intelligent listener. She will keep the departments informed as to what map materials are owned by the school. It is her business to see that the maps are housed adequately.

For a small school, with only sixty to seventy-five maps on file at any one time, a map case which is adequate and economical of space is one whose depth is only that of library shelving, so if necessary it can be built continuously with the shelving. It should be 6 feet high by 6 feet long, and the shelves should be 8 inches apart. In such a case the shelves are tilted, the drop from front to back being 3 inches. Doors are hinged at the bottom to drop flat when opened.

The school librarian should have her ear to the listening post. In the present chaotic state of map changing, when the social studies department indicates a desire to have on file a series of the maps put out in various newspapers, she should have the answer. An easy way of handling that material is by using envelopes which hold newspaper maps folded in fours. These envelopes are filed in pamphlet boxes and are arranged by country and then by date. Contemporary vital speeches can be handled in somewhat the same way. When teachers see that what they collect will be organized for use, many requests, accompanied by excellent material, from students and teachers will pour into the library.

The stereoscope is housed with difficulty by the library because of its awkwardness and its bulk. But if the library has been equipped with excellent cupboard space in workroom and storeroom this difficulty is negligible. Stereographs can be filed in regulation units of metal or wood. The important thing for the librarian is to have them readily accessible and to have them classified according to the needs in her school.

Lantern slides can be handled through the library, but, especially in case of the science department, it would be more convenient for the department that full tabulation and classification of such be

[4] John Cotton Dana, H. W. Wilson Company, 1929.
[5] Mary E. Townsend and Alice G. Stewart, H. W. Wilson Company, 1937.
[6] Katherine E. Wheeler and J. A. Hilson, H. W. Wilson, 1930.
[7] Maxie N. Woodring and others, Teachers College, Columbia University, 1928-1934.
[8] *Op. cit.*

on file in the library, through a ready reference file, while the materials themselves are housed in the department where they are most used. The same can be said for maps, globes, and certain permanent exhibits. For instance, the agriculture classes will have certain commercial exhibits. At times material used constantly by agriculture classes will be very usable in a science class, a home economics class, or in social studies. If the material is housed where it is used constantly, but with a complete record of it on file in the library, all the resources of the school are interchangeable and can be called to service at the psychological moment.

In the city school system where there is a department of visual aids, the method of handling film materials is predetermined, these frequently being cleared through the principal's office. The librarian should know what is available and where it will be usable.

In the smaller community where there are not more than twenty-five or thirty high school teachers and the librarian works very closely with each as an individual, however, it is likely that the motion picture program will be handled by the librarian. She should collect educational film catalogs and have her teachers check motion pictures which, if good, will work in with their own class plans. Then she can recheck and find out which films seem to be wanted for a number of courses so that, with a limited budget for rentals, she can select only those which seem most important for a course or those which can be used jointly. When these films are run off she should have the teachers comment on them and rate them on a three-point scale as a guide to their value for use another year. These notations on 3 x 5 cards, classified under subject, will be invaluable when the next year's selections are to be made. The most important feature is to get reaction to the film, through teacher and student, so that poor or unsuitable films will not be reordered.

WHAT can the librarian do to further the interest of teachers and students in the school journey? Again the library can be a clearance house.

Practically every public library makes a survey of the community it serves; frequently the children's department has an individual survey. The school librarian well might study these surveys. If there is no such study of her community she might undertake one for herself.[9] If the school librarian finds such a survey has been made she can make a card file for quick reference to such materials as local biography, local history and government, local agencies doing social work, outstanding industries, cultural interests, group interests, local publications, the location of the school in relation to the library, bookstores, moving picture houses.

THE library should have a file of sources of possible museum material. The alert librarian will capitalize school interests to have exhibits—and connect these exhibits with book materials for reference and for pleasure reading. She will encourage the individual student to have a one-man hobby show.

But the library cannot serve as a museum also. The librarian can be the research assistant, the publicity agent. But such a collection should be housed separately and managed separately. It is the librarian's job, however, to know what is in the museum and to be able to recommend use of such materials when occasion arises.

Those visual materials described in

[9] See Joseph Wheeler's *Library and the Community* (American Library Association, Chicago, 1924) and Effie Power's *Library Service for Children* (American Library Association, Chicago, 1930).

the above paragraphs, to small or large degree, should be owned within the school and their administration should be in the hands of the librarian as already discussed. In addition the librarian may have charge of the circulation of a portable radio, a projector, or a motion picture machine. But the question does come up as to how much one librarian can do, what teaching load she can carry—she may even have charge of distributing textbooks, as well as administering the library. If she has plenty of space for housing stereoscopes, moving picture machines, and the like and if she has adequate clerical help, there is no question as to what she can do. But assuming that she has sole responsibility for maintaining the library, the textbook collection, and the visual aids materials, there is question as to how much she can accomplish and as to which of her duties must come first.

Her first duty is to the teachers and students, to help them, through the medium of the library, to make the whole learning process a happier and richer one. When so much in the way of clerical work looms up there comes the danger of the librarian's losing perspective on the real objective of a librarian, of her trying to juggle an impossible number of jobs. That is the time for her to be articulate and, firmly holding to her objectives, demand or find assistance in the routine matters.

The recounting in this article of those services, vital to the school, which may be performed by the school librarian brings us to the question of the function of the school librarian.

The library is not a separate department, manned by a hoarder of books; the library is the school at work. For behind every teacher, with books, pictures, other helpful teaching materials, is the librarian, alert to any service which will promote good teaching. Behind every student, with personal friendliness, is a librarian ready to assist in book selection, reference help, or whatever service may suggest itself. Behind the administrators, with knowledge of their aims and policies, with professional interest, is the librarian, ready to assume whatever obligations may seem best for the school. She brings together all the resources of the school and, through intelligent service and significant files, sorts them out and redistributes them when and where they are needed.

New Books in the Field of Education

New books in the field of education which have been issued in recent months and which have been received recently in the JOURNAL offices include the following:

Audio-Visual Aids to Instruction, by Harry C. McKown and Alvin B. Roberts. McGraw-Hill Book Company, 1940. Price, $3.00; 385 pages.

An Educational Program for the Youth of New York State, prepared by the Committee on Youth Needs. New York State Teachers Association, Albany, New York, 1940; 24 pages.

Evaluating the Work of the School, edited by William C. Reavis. Proceedings of the Ninth Annual Conference for Administrative Officers of Public and Private Schools. The University of Chicago Press, 1940. Price, $2.00; 236 pages.

Philosophy, Education, and Certainty, by Robert L. Cooke. Zondervan Publishing House, Grand Rapids, 1940. Price, $2.75; 392 pages.

Professional Education for Experienced Teachers, by Kenneth L. Heaton, William G. Camp, and Paul B. Diederich. The University of Chicago Press, 1940. Price, $1.25; 142 pages.

How to Explore for Visual Materials

By MARION LOUISE ISRAEL

So many of us excuse ourselves from not making more effective use of visual aids by saying that our school has no collection of materials suitable for our needs. But if we become explorers, searching for what we need—in the book shops, in the factories, in the art catalogues, in the magazines, always looking for something to add to our collections—we experience all the zest that a collector derives from his hobby, and at the same time we enrich the resources of our school. Miss Israel's article is the chart which will guide us on our explorations.

Miss Israel is course-of-study assistant for the Los Angeles County Schools. Formerly she was director of the County's Division of Visual Education and so is well qualified to advise the explorer in this field.

LET us think about some substitutes for that Utopian conception, a completely stocked central library of visual aids. Because courses of study are never finished, because they must be constantly modified here and there to keep the content and the emphasis related to life and its actual circumstances and problems, the need for adequate instructional materials will always be in advance of the supply. The assembling of collections of visual materials in any subject field is often a long drawn-out process even for the central library, because of the incompleteness of the materials which can be purchased ready-made. It is inevitable that the central library will frequently be under the necessity of saying, "We are sorry, but we haven't anything on that."

And many school districts do not even have a central library from which their teachers can draw.

For one or the other of these reasons many teachers are under the need of making their own collections of the less costly types of visual materials. The search for these aids grows more absorbing as it proceeds. The result is a custom-made collection for the teacher's own work.

VISUAL materials fall into two broad groups, determined by the subject matter to which they contribute. There are the historical and other static subjects, and the contemporary and dynamic subjects. The first group contains representations of events and objects that are finished, which are no longer changing. They show forms of things, both present and past—examples of architecture, for illustration, both ancient and modern. In contrast to this first group are the materials which illustrate the erection of a modern building in such a way as to show how different kinds of materials, from many different sources, by different kinds of labor, are knit into a serviceable product—a unity out of variety, a complex of relationships. Such are the contemporary and dynamic subjects for which graphic, vivid representation is needed.

IT is not difficult to find visual materials for subjects in the first group. The museums are rich hunting grounds. Nearly all the large museums have photographic departments and sell prints of many of their exhibits. So do some

historical societies. Public libraries have lists of museums and historical societies throughout the country, with annotations indicating the nature of the collections. The larger museums issue catalogues of the photographic prints which they can supply. It is well to ask for available prints in the particular subject desired. Do not overlook the Smithsonian Institution.

A central library will need several copies of each print. One glossy print, preferably 8x10, may be purchased from the museum and a negative made from it, from which circulation prints can be made as needed. If a circulation print or prints are purchased, it is well to specify matte paper, or semi-matte, as the reflection of light from the glossy print is trying. For furniture, costume, implements, weapons, arts, and crafts through the ages, for studies of peoples and of history, go to the art museums. For inventions and the evolution of different industries and modes of transportation, try the Smithsonian Institution.

Other static materials are collections of specimens. It is possible to purchase collections of minerals, of insects, and the like. It is possible also for the teacher to develop his own collections of local specimens. These may grow slowly, gleaned on week-end jaunts over long periods, or one vacation may yield much treasure. For some months now the writer has been laying away outstanding examples of beautiful printing as she comes upon them in magazines, advertisements, catalogues — to illustrate printing as a modern art in a history-of-records unit.

Some magazine illustrations are very worth-while, preferably full-page plates from the large-size magazines. The art magazines often have beautiful cuts and colored plates of crafts and designs. The plates should reproduce the objects with great fidelity, and the detail should be clear and sharp. Many vary attractive illustrations are so soft in texture that they do not clearly show the thing represented. For this purpose it is not necessary to subscribe to all the magazines. They may be scanned in the public library and back numbers ordered from the publishers or possibly purchased at the local second-hand book store.

Old books are sometimes worth buying for the plates they contain, particularly in the fields of art and history. The art publishers can furnish good reproductions of paintings, old and modern, at prices ranging from 50 cents up. Send for catalogues, and ask for the name of the nearest dealer.

No representation, however, is equal to the thing itself. Most schools have some funds, even if but a small amount each year, with which to acquire a fine print or etching, a bit of rare textile, or a lovely piece of pottery. Students need first-hand experiences with these things; they need to see and to handle for full appreciation. It is therefore profitable to haunt the local art and oriental store and antique dealers.

SO much for the things historical and static, for finished objects complete in themselves. To present to the student visually the complex of activities and interests and conflicts which make up the world in which he lives requires a different type of material. It may be that this is the supreme contribution of the motion picture—this revealing of the intermeshing of many factors in a social problem, of the merging of many processes, immediate and remote, in one product, of the relationships and the impacts on one another of people who never meet.

The economic activities necessary to society form one of these dynamic fields. A series of local field trips would be an ideal approach to understanding and ap-

preciation. Survey the immediate locality for products that are raised, goods that are manufactured, commodities that are transported. Consider also the vocational possibilities offered by these enterprises, not as vocational guidance, but as one of the important aspects of economic activities.

In arranging for field trips, one must be very considerate of the firm to be visited. The time set must be convenient for the industry, the number of visitors must not exceed the number planned for, and the visitors must arrive on scheduled time. It is no little inconvenience for an industrial plant to extend its hospitality to a group of students. Appreciation for an educational opportunity which can be realized in no other way should be evidenced by conformity with every detail stipulated by the industry.

Student preparation for such field trips is a logical place to use some of the free films offered to schools by industrial concerns. There is really no point in using a film because it is free and because some one is anxious to show it to the student body. But for a particular class about to visit a particular industry, a film showing that same industry, although it may be a different plant in a different part of the country, would be a very effective preparation. And once the students have seen the process and know something of how it must feel to work in that industry, and have some appreciation of what the industry means to the community, a desirable follow-up for the trip would be a film relating to the same industry, made not by the industry but expressly for school instruction. Such a film would shift the emphasis from the process itself to the rôle of that industry in relation to other industries and to its consumers. Here are two types of films, differing primarily in emphasis, each making its own contribution.

IT is more satisfactory to buy films for instruction than to try to produce them. The commercial producers have equipment and technicians not at the disposal of the amateur; they have financial resources; they can sell prints for less than amateurs can make them. This argument applies, of course, to films for instruction, not to those records of school activities which each school must make for itself. Of course, if a teacher intends to become expert with the camera, can find the time and the means to do so, and is prepared to waste a lot of film, he should be encouraged. Unless the product is comparable to the offerings of the educational producers, however, the money put into the film has hardly been spent to the greatest advantage.

The evaluation of educational films is an essential part of the exploration for acquisitions. An intensive discussion of criteria for evaluation deserves a treatise by itself. It will be sufficient here to suggest that you make for yourself a little schedule of criteria. These criteria might fall into three groups—one relating to content, its authenticity and the clarity and effectiveness of its organization; one relating to technical and artistic excellence; and one relating to the purposes which the film could serve in the classroom, the effects which the film in skillful hands may produce on the students in a particular class. A clear illustration of purpose was the statement of a social-studies teacher who said she would use the film *The River* primarily to give her students an idea of what a social problem is, to give them insight into the nature of social problems.

Is it better to buy films or to rent them? It is probably better to do both. If the film is needed for class instruction in the sciences, in the arts, in social problems, if the film is to be used again and again in different classes or to be

presented several times to the same class, its purchase should be an economical investment for any school. If a film is wanted for an assembly—something on health, on safety, on current events, or something to give a truly aesthetic experience—it may better be rented.

EXPLORATIONS are carefully organized from the standpoint of objectives. One explorer may be looking for specimens of some one thing; another may be looking for a sufficient variety of specimens to afford a reconstruction of some phase of nature or of a culture. The explorer for visual materials will find a mental blueprint of his objectives for a given subject will yield completeness and balance in the group of materials that he may assemble. A typical group of materials might be charted something like this:

One or more objects, specimens, models, or facsimiles.
Preparation film.
Field trip.
Follow-up film.
Map slides.
Books and paper prints for student research.
Attractive wall pictures (particularly applicable in some fields of subject matter).
Slides for student reports and discussion.

Exploring for visual materials affords the explorer keen enjoyment. He will get acquainted with the art and book dealers in his community, he will have moments of delight as he browses among their stocks; he will know the business men, the manufacturers, and the farmers in his locality, how they are operating, on what factors they are dependent; he will be visiting the accessible historical landmarks; he will know the surrounding fields and hills and trees and rocks and birds; perhaps he will know some foreign colony, in which he will make friends and glean at first hand some fragments of the customs and the outlook on life of people from other lands.

The exploration may give all the zest which any collector derives from his hobby; better still, it will make richer the pooled contributions from all those seeking for effective materials of instruction. The explorer goes out of the schoolroom into the world to find treasure to take back into the schoolroom.

Three Motion Picture Studies

Three studies on the use of motion pictures in the classroom, ranging from interpretation of films in social science courses to the outlining of methods for darkening a classroom, have been published recently by the Committee on Motion Pictures in Education of the American Council on Education. They are the first of a series to be published by the Motion Picture Project following its three-year program of evaluation of educational films.

One of these in particular, *Projecting Motion Pictures in the Classroom* (American Council on Education, Washington, D. C., 1940, 80 pages; 50 cents), will be of interest to readers of the JOURNAL'S symposium on visual education, for it is written by Francis W. Noel, who has contributed an article to the symposium. In his booklet Mr. Noel reports methods for using motion pictures as they were worked out at Santa Barbara, where he is director of visual education. He gives rules for darkening and ventilating a classroom, explains the points that should be considered in selecting a projector, and tells how to operate a projector.

Use of Motion Pictures as a Curriculum Aid

By LILLIAN A. LAMOREAUX

The illustration of how two teachers learn to use motion pictures as an aid to their teaching, which Miss Lamoreaux presents in this article, serves to bring out the point that motion pictures—or any type of visual material, for that matter—contribute to the curriculum only in the degree that there is purpose in their use, that there is understanding in the manner in which they are handled, and that there is adequate follow-up of their showing.

Miss Lamoreaux is director of curriculum and instruction in the Santa Barbara City Schools. She is particularly fitted to write on the use of the motion picture, for Santa Barbara, during the past year, has been participating in a national study of the use of the motion picture in the curriculum.

MISS Z, a typical teacher who is beginning to use visual aids, goes to the telephone and calls the director of visual education and says, "Please send me out an interesting film on conservation. We are studying conservation, and the pupils like movies so well; I know they would love to have me show them a film. I am sure they will get a great deal out of it, too."

Miss Y, another typical teacher who is beginning to use visual aids, is very enthusiastic about motion pictures. She believes that the children can learn so much more from motion pictures than they can from the average classroom work, so she operates on the principle that the more pictures they use, the more they will learn. She stands before the bulletin board and gazes over the list of films that are available for the building that month. She signs up for two-thirds of them for her classes.

If one were to question Miss Y as to her reasons for the selection—for what purpose did she select the films, or how will she use them in the classroom—she would reply naïvely that all the films that come to her building are educative and the pupils get so much out of them that she selected those that she knows will interest her pupils. Replying to the question as to how she would use them, she would say that she intends to show the pictures and then the pupils will discuss them afterward.

THESE teachers have failed to recognize that motion pictures, or any other visual education materials, are tools of instruction comparable to books, pamphlets, newspapers, microscope, excursions, et cetera. Good instruction does not find its foci in the tools but rather in the educational purposes of the classroom work. The tool used is selected because it contributes definitely to the realization of those educational purposes. Therefore, it is reasonable to expect that visual education material be used to meet definite curriculum purposes; also, that visual education material used must be an integral part of the ongoing classroom work—not something brought in because it is interesting or considered educational.

In utilizing any tool in the classroom, the teacher knows that if learning takes place, there is some modification of behavior; therefore, there must be opportunity for activity or reactions on the

part of the learner. The wise teacher never assumes that learning has taken place, but she utilizes various means and instruments in checking learning or changes in pupil behavior.

THE visual education director and the director of curriculum and instruction recognize the sincerity of the teachers typified by Miss Z and Miss Y. They recognize their responsibility to these teachers in the improvement of instruction and wise utilization of new and valuable classroom tools, so they plan a conference to talk over the problem. This conference results in a series of conferences, for such teachers do not rest until they have grasped the principles and are able to put them into operation.

Let us look now at the changes taking place in the use that Miss Z and Miss Y are making of visual educational material.

First Miss Y and Miss Z analyze their classes; then they plan their area of instruction; they set up their objectives and think through the larger problems which are found in that area, also considering the major activities which would help solve or give improved insight into the problems. Next they think about the teaching tools available to teachers and pupils. They think of the various uses to which these tools could be put and the relative value of each in given situations. Perhaps they will think, "Here is a problem which probably will be difficult because it is abstract. To be sure, we have books, but they give us only a word picture. Now if we lived in the city we could take an excursion and thereby have a concrete experience, but the city is too far away and the trip would be time-consuming. Perhaps we can secure a motion picture which will give us a clear insight into the problem. If so, we will utilize that tool of instruction."

The teachers make a trip to the Visual Education Department and look, not only at prints, dioramas, exhibits, but also they preview numerous motion pictures, slides, and still films. They make notes of those aids that will contribute to the classroom work because they will arouse curiosity, raise questions, and stimulate discussion; those that will give specific help on problems by serving as a means of setting the problem clearly before the pupil; those that will serve as a source of information, furnishing dynamic, vicarious experiences in lieu of first-hand experiences; or those that will serve as a review or culminating activity. Those teachers no longer think of the quantity of material they are to use, but rather of the quality of use to be made of each bit of material selected.

IF we could follow these teachers through the year, we would find that the visual materials serve only as a springboard from which many vital experiences come. After presenting the visual materials, the teachers ease the class into discussion situations which encourage free and spontaneous reactions. The experience does not end here but may result in several types of behavior, according to individual abilities, interests, and purposes—such as creative activities involving dance, music, fine or industrial arts, written or oral expression.

Having fulfilled the original purpose, these teachers give ample opportunity for each experience to raise new problems, alter thinking with regard to past experiences or problems, change present purposes, or set new ones. Each curriculum experience should open vistas to new and challenging experiences as well as become an integral part of past experience.

Although it would be impossible for them to solve all the new problems

raised by these visual aids or to participate in all the new and desirable experiences that they have initiated, yet these teachers now make provisions for the satisfaction of many of these new problems and purposes — some in the classroom and some through guiding the pupils into sources and means of carrying out their desires outside of school.

These teachers now evaluate these tools of instruction, not only from the seeming interest their pupils manifest in the visual education materials, but they check on the number and variety of ideas gained from the material; they analyze the behavior of their pupils, the attitudes that develop, the soundness of their pupils' judgment, the number and variety of activities in which they have participated; their growth in ability to think, as judged by the questions they ask, the replies they make to the thought questions, the use they make of materials, their assimilation and integration of new and old experiences, their realization of purposes fulfilled.

Grant for Motion Picture Research

An initial grant of $1,000 has been made by Coronet Productions, Inc., to Indiana University for educational motion picture research. The results of the research will be used by Coronet as a basis for planning and producing educational motion pictures for classroom use. Coronet Productions have offices in Chicago and a production studio at Glenview, Illinois.

The research will be supervised by staff members of Indiana University, and its purpose under the terms of the Coronet grant is to analyze the curriculum content of grades 1-12 in order to determine those topics for which motion pictures may provide a more adequate experiential background for classroom instruction. The project is to be administered by a committee composed of Dean H. L. Smith of the University's School of Education; Professor R. E. Cavanaugh, director of the Extension Division; L. C. Larson of the Bureau of Audio-Visual Aids and the School of Education; and two additional members of the School of Education faculty, selected by the original committee of three. The two other members of the committee are Professors Carl G. F. Franzen and Velorus Martz.

University professors will begin work immediately on four studies recommended by the local committee and accepted by Coronet Productions for providing information which the company must possess in order to develop plans for a systematic program of educational film production. Professor W. W. Wright will supervise an elementary grade study designed to identify topics included in grades 1-6 which may be presented successfully by educational motion pictures. A project in the social studies area for the purpose of ascertaining which social science situations are taught most often in grades 7-12 inclusive will be directed by Professor I. O. Foster. Professor Melvin S. Lewis and John H. Dillon will supervise a study in which it is planned to determine the basic understandings and skills that are considered most important in the field of business education. Dr. Karl Bookwalter will supervise a study designed to identify, within the areas of group games, folk dancing and fundamental rhythms, the activities which are most frequently used in each grade of the elementary and secondary schools.

James A. Larsen, vice-president of Coronet Productions, and David A. Smart, president of Coronet Productions and publisher of *Esquire* and *Coronet* magazines, were responsible for these arrangements with Indiana University, through the Bureau of Audio-Visual Aids in the Extension Division.

Ventura County's Program of Visual Education

By PERSIS HAMILTON

In the provision of visual materials, the small school is at a distinct disadvantage as compared to the city school system, for the small institution usually lacks the finances and the leadership to make extensive use of visual aids possible. One solution for this problem seems to be in the pooling of resources by all the schools of a county — which course, as followed in Ventura County, is described in the present article.

Miss Hamilton, who writes the article, is now director of rural education in Ventura County, but Superintendent W. K. Cobb assures us that she knows as much as anyone about the plan she describes herein, for she was the first supervisor of the Ventura Visual Education Department. Present director of the Department is J. W. White, whose work Miss Hamilton tells of in the article.

OUR program of visual education was organized in Ventura County to fit the needs not only of the many small rural schools but also of the larger schools which do not have available the funds or personnel to carry out an adequate program of their own.

Two years ago the Ventura County superintendent of schools sponsored a Visual Education Project under the Works Progress Administration. From a very meager beginning with three workers in a vacant classroom has grown a department which now occupies the entire second floor of the County Education Building, employs between twelve and fifteen craftsmen and women, and provides wide varieties of visual equipment for all the county schools.

A catalog contains a complete list of aids we have available for teachers' use. This reveals a supply of foreign realia and dioramas, factory exhibits showing processes used in manufacturing of products, pressed leaves, seeds, pods and wild flowers, minerals, birds, still films, science specimens, flags of more than fifty countries, coins, bound *National Geographic* articles, models of the history of transportation, costumed dolls, electric and relief maps, charts, posters, and thousands of mounted pictures.

Distribution of these materials to the teachers is facilitated by means of a filing system. Every article carries the stamp of the Department.

WHEN the Department was organized, under the supervision of the writer, men and women eligible to work on the project were selected from such classifications as "model maker," "seamstress," "carpenter," "photographer." Those first employees went to work making cardboard boxes for the distribution of exhibit material—some realia of foreign countries, nature displays, and industrial exhibits already had been collected. Old magazines were stripped of suitable illustrations. Every aspect of learning was considered in the selection of these pictures, which were uniformly mounted.

Two women were employed to make dolls. These they created out of pipe cleaners covered with cotton, wrapped in crepe paper and dressed in folk costumes of the countries. Flags of the countries were made.

Work benches were erected, and tools were added as new employees came. A new director, who assumed duties at the beginning of the school year, employed the workers in the collection, identification, and mounting of natural science specimens. Shells, leaves, cones, insects, birds, wild flowers, seeds, and rocks were prepared for classroom use at very little expense. Small jars neatly labeled and placed in boxes convenient for distribution were filled with samples of soils to provide students the opportunity to feel and see how sandy soil was different from loam and clay. Butterflies and insects were mounted between pieces of transparent celluloid. Pictures arranged in sets of not more than twenty in large manila envelopes were classified under such topics as "Community Life," "Community Helpers," "Bees," "Castles," "Circus," "Christmas," "Pilgrims," "Pioneers," and "Weather."

DURING December, 1938, the Visual Aids Department was located in its permanent home. This room is forty feet square with three smaller adjoining storage and workrooms. Careful utilization of space has made it possible to accommodate the dozen workers, their tools and equipment. Adequate floor space, light and heat, and easy accessibility to teachers, have enabled the visual education department to become a real institution.

Requests for materials increased rapidly. The County Library coöperated with schools in the problem of the distribution and collection of materials through the use of the book truck which visits every rural school twice a month. Teachers desiring to select materials now come to the Department in the late afternoon and on Saturday mornings. Wide parking areas surrounding the building facilitate their securing visual aids. Teachers may also obtain materials by written request, while deliveries often are made by members of the supervisory staff upon scheduled visits to schools.

All the value of the Department's existence is not centered in the fortunate teachers and children who use the models and other visual aids in the classroom. A visit to the department on a working day permits one to see WPA workers, happy and interested. In one corner sits a former commercial artist, now nearly blind—a man at one time an expert craftsman and who, though eligible for a blind pension, prefers to work. It is he whose years in China have given him the ability to create lifelike figures for dioramas of Oriental scenes. A gracious gentlewoman makes the beautiful folk costumes for the dolls. Her inherent pride is gratified by the quality of work which she does, in order to save a tiny home for herself and her invalid husband. She finds joy in remembering birthdays of the workers and helps maintain a fine morale in the department. All these people are inspired to create when they see the interest and enthusiasm evidenced by students who visit the visual aids museum on class excursions.

MANY factors contribute to the success of an efficient visual education department. Of primary importance is the director. Our own director is a skilled craftsman, teacher, and administrator, one who supervises the work in an admirable way. He is qualified to answer the most technical drafting problem, can carve, assist in making of molds, and even has given instruction in embroidery. One of his devices for star study was featured in the Los Angeles *Times* and attracted attention of the Washington WPA Office—he uses a black umbrella firmament with eyelet stars to simulate the constellations of the northern hemisphere.

Another factor of great importance

in the organization and administration of a visual education department is the choice and promotion of personnel. Workers are carefully selected and instructed. Promotions foster good workmanship and good will among the employees. Of course, some workers have been chosen who were unable and occasionally unwilling to do satisfactory work. These have been transferred to other projects.

Great care must be exercised in the purchase of materials for the construction of models. Last year only $400 was spent by our department for the purchase of paint, lumber, clay, and other supplies. The actual construction costs on each article are very low. Material for a diorama costs about $10, that for large relief maps between $3 and $5. The binding on each *National Geographic* article costs approximately eight cents, and each picture mount between one-half cent and one and one-half cents, depending on the size of the piece of craftboard used. Careful checking of materials prevents serious loss.

Types of visual aids to be constructed by our department are determined by the director of visual education in cooperation with the curriculum coördinator, both of whom are members of the staff of the county superintendent of schools. Their knowledge of the teachers' needs is based on a definite understanding of units taught and on the available facilities. Objects outside the actual experiences of the students are those of primary importance to our department.

By means of excursions teachers can take children to factories, dehydrators, oil refineries, and to the seashore. Some materials from such learning experiences are collected by our visual aids staff, labeled, and classified for class discussion; however, special emphasis is placed on the creation of other objects—for example dioramas depicting the actual construction of a Chinese peasant house and the threshing of wheat or relief maps of California.

TWO points are particularly worthy of note when we consider the effectiveness of a visual education department.

The first of these has to do with the usefulness of the materials collected. It is often easy to direct work along one specific line, but the *needs* of the teachers at all times must determine the types and variety of work to be done. It is readily seen that keeping all the workers employed in their proper classification as specified by the Works Progress Administration and at the same time providing worth-while, useful materials for the schools, as we have tried to do, requires the utmost care in planning. The second of these two important points has to do with the availability of materials to teachers. In our own case teachers feel encouraged to use our services because the Department is easily accessible. Materials are loaded into their cars at the building, requests are promptly granted, and often visual aids are made for teachers upon request.

Coöperation, careful planning, and wise administration have made our own Visual Aids Department a vital factor in the educational program of Ventura County.

L. A. C. C. Publishes a Directory

Who's Who in Tau Alpha Epsilon is the title of a recent publication of the Los Angeles City College. The directory lists the accomplishments of each of the 301 individuals who have been members of Tau Alpha Epsilon since it was organized at L. A. C. C. ten years ago.

A Proposed Visual Program For California

By H. M. McPHERSON

During the last two or three years Dr. McPherson has conducted an extensive study of the "organization, administration, and support of visual instruction in California." This investigation gave him the data for his doctoral dissertation at the University of California and furnished the basis for certain recommendations made by the California Association of Secondary School Principals. Dr. McPherson's own personal recommendations in regard to the future of visual instruction in California, together with certain of his data in support of them, comprise the present article.

The writer, who was principal of the St. Helena Union High School before becoming district superintendent of the Napa Union High School last September, says that four important developments have occurred since his study was completed: (1) the state superintendent has asked a committee to draw up a report on the function of a state division of visual instruction; (2) the number of county visual directors has been doubled; (3) courses in visual instruction and visual conferences have been offered in the summer sessions of several California colleges and universities; and (4) an adverse ruling of the Los Angeles County district attorney has closed the Los Angeles County Visual Library, oldest and largest county department in California.

DESPITE the universal recognition of the effectiveness of visual materials in the teaching process there are few school districts in California that do more than pay lip service to visualization of the curriculum. With this problem in mind the writer undertook in 1938 to ascertain the status of visual instruction in California, to determine the administrative problems involved, and to make recommendations that would aid school administrators in establishing a continuous program of visual instruction.

In this study data on the nature and extent of visual instruction in California schools were obtained from 349 of the larger school districts and from fifty-six county superintendents, these districts and counties including about 85 per cent of the children of the State. An intensive study was made of the organization and function of visual departments in the large city districts and of the distribution of motion picture films by the University of California.

THE major conclusion arising from the study is that the smaller city school districts are unable in themselves to provide the chief essentials of a successful program of visual instruction. On the other hand, the dozen large city districts with one or two exceptions, have strongly centralized, well organized, and ably directed visual libraries which provide an abundance of visual materials to teachers. These districts of 10,000 average daily attendance or more are able on a budget of 50 cents or less per pupil to provide a wide variety of materials. For example, an inventory of the Visual Department of the Oakland School System shows that teachers there can make selections of illustrative materials from the following:

299 16 mm. motion picture films

323	35 mm. film slides
64,800	glass slides
610	still films
11,510	stereographs
150,000	flat pictures
489	wall prints
815	phonograph records
500	models
310	charts and maps
142	framed pictures
210	exhibits
545	pamphlets

BESIDES the more or less standardized materials which are to be found in varying degree in all of the cities, visual departments of the large districts are responding to local curriculum demands by accumulating and organizing such materials as costumed dolls, flags for every occasion, art collections of both oil paintings and reproductions, electric transcriptions of worth-while radio programs, and puppet shows. The Berkeley department administers a wardrobe of over 1,500 costumes.

Visual apparatus such as movie projectors and cameras, stereoscopes, stereopticons, film slide projectors, public address units, electric phonographs, transcription recorders, glass slide kits, are usually owned by individual schools; but in Oakland these items also are centrally administered.

In the well-equipped laboratories of city visual departments photographers, artists, and artisans constantly are producing material as outlined by advisory committees of teachers and supervisors. Librarians, researchers, and cataloguers are busy locating, securing, and preparing needed illustrative items.

In these large districts expert visual directors supervise the organization of the materials and bend their efforts toward inducing teachers to make use of the most effective aid at the appropriate time. Catalogues, bulletins, demonstrations, lectures, and supervisorial visits are among the devices used to instruct the teachers as to the material available and its proper use. The visual department of the city district rapidly is becoming the center for the improvement of instruction in the school system.

In sharp contrast to the picture presented above it can safely be said that the smaller districts have scattered their efforts with little or no direction. A much higher expenditure per pupil than occurs in the city is usually accounted for by heavy investments in expensive equipment, which then lies idle for lack of operating funds or because its educational value is not discovered before the novelty wears off. When these smaller districts designate an individual as visual director, it usually is a gesture more than a fact since other and prior duties leave the person little time for organizing or directing a department. As a result a bare half dozen districts under 10,000 average daily attendance have centralized their visual materials or organized them so as to make them readily available to teachers. Technical assistants such as photographers, cataloguers, or artists are practically unknown outside the dozen major cities in California.

In the light of these facts three recommendations can be made which look toward the establishment of a system of visual instruction in California, to the end that visual materials will be as much in the consciousness of all teachers as are classroom books today.

FIRST of all, there is need for a Division of Visual Instruction in the State Department of Education to supplement the work of local visual departments, much as the State Library now operates in its own field. City and county visual directors have pointed out that the constant search for new illustrative materials should be coördinated to eliminate unnecessary duplication of effort among city and county departments. There is definite need for the production of local materials to illustrate teaching

units on California life, which might well be directed or produced by a State agency. Agricultural, manufacturing, and commercial agencies have stated again and again their desire to produce illustrative material depicting processes and values in their field under the direction of a central educational agency.

A well-trained state director available for consultation with local school administrators could prevent the waste of much time and money, according to the supervisors now directing our visual programs who participated in the study.

The need for State support and direction of motion picture film distribution was particularly evident throughout the entire study. The high cost of motion pictures and the technical aspects of their use create a special problem in the organization of a visual program. Four-fifths of the districts studied own projectors, and one-fourth of these districts use no other means of visual instruction, yet only a few of the largest city districts have film libraries.

Most districts rely almost entirely on commercial agencies for "free" films, and those that turn to the Visual Center of the University of California for classroom films ignore established principles in the use of films. For example, 85 per cent of the University's classroom films are rented for one-day use only, despite the well-established need for teacher preview and for classroom reshowings as the learning unit develops. This condition is largely brought about by attempts to reduce or escape the customary rental fee for educational films. Penny-wise and pound-foolish seems to characterize the use of what has been termed the most potent instrument of instruction yet devised.

The fact that in three-fourths of the districts films are not previewed before class showing and that the use of commercial films is unregulated means that children are of necessity subjected to uncontrolled and unplanned learning situations. Most administrators and supervisors recognize these criticisms by suggesting that films be retained by a teacher for at least a week. The University, which long has been the leader in the field of classroom film distribution, now is adapting its distribution procedures and rental rates to encourage better educational use of films by public schools, which accounted for 66 per cent of its film circulation in 1938.

Evidence points strongly to the inadvisability of individual districts purchasing motion picture films. Relative high initial cost, the rapidity with which films are outdated, and the administrative costs involved make it far cheaper for films to be centrally distributed. The study revealed that only through State distribution does a film receive maximum use. Few films in the University Visual Center have seasonal or "peak" demands made upon them. This is probably because of the varied courses of study in the State as a whole. Even when films receive almost constant bookings, which are impossible to obtain even in the larger cities, most films will outlast their usefulness since they are good for several hundred projections. New and improved prints, technical improvements such as sound and color, changing customs and dress lay stress on the maintenance of an up-to-date film library, which can be achieved only on some such broad basis of organization as that proposed herein for the State as a whole.

Many of the 365 public school users of films from the Visual Center point out the desirability of a wide selection of films and a constant supply of the newer subjects, which at the present time can be found only at the University. Many also feel that a public school visual center is more properly a function of the State school system than of the University. It would appear that a State

supported film library, be it under University or State Department of Education administration, is necessary before films will receive the same consideration from teacher and administrator as book libraries now do.

THE second recommendation resulting from this study is that county or regional visual libraries appear to be the solution to the problems of administering and financing visual programs in the smaller school districts.

Los Angeles County and a few others to a lesser degree already have demonstrated that the rural districts can have access to materials and expert supervision comparable to those provided the large city districts. Nearly one-half of the county superintendents are providing some visual services, but with two or three exceptions the services of the county department are limited to elementary school districts under 300 average daily attendance. Such a county or joint-county organization is desired by 85 per cent of the administrators of school districts which would be called upon to finance the program.

There is a tendency for both the county superintendent and the county librarian to expect the other official to provide and care for visual materials. The librarian points out the inadequacy of the library budget to cover a new field, the lack of trained personnel, and, oftentimes, the limitation of cramped quarters. From evidence submitted it appears that the county librarians would willingly undertake this new service if additional funds were provided.

Since the number of visual items used by a teacher increases greatly with the size of the visual library, it would seem imperative that visual departments be organized on a base broad enough to afford a well-stocked library and a full-time director. Just as no library will run itself, so no centralized visual department can be organized and administered without expert direction. The position calls for thorough training in library procedures and in the technical aspects of photography and for experience in supervision of classroom teaching. There is ample evidence that where qualified directors are supervising the visual program there is phenomenal increase in teacher use of visual materials.

There is no uniform procedure followed in financing county visual departments. Coöperative film libraries have been established in four counties by the deposit of one or more films by the participating districts. In other counties, districts contribute on a per pupil or per teacher basis. These sums are sometimes supplemented by the county superintendent from "unapportioned" or "supervision" funds.

In a few counties projection equipment also has been purchased from common funds and the equipment loaned or circulated much as it is in some city systems. The problem of circulation of materials is being met by devious methods, but it remains one of the most serious obstacles to a county coöperative program. A department truck with scheduled trips is finding favor in county as well as city systems.

The financing of a county or regional visual department has encountered legal difficulties in some counties where district attorneys have ruled against either the use of unapportioned funds or the pooling of district funds or both. There is need for legislation which will clarify existing provisions in the School Code and give to the county superintendent power to provide complete visual services to all school districts in the county.

THE third major recommendation is addressed to the teacher training institutions in California. Teachers must be able and willing to use the newer

techniques in their classrooms. Far from supplanting teachers as has been sometimes suggested, the use of motion pictures and other visual materials calls for individuals able to make more careful selection of materials and more detailed preparation than was formerly demanded of teachers.

Administrators point out that less than a fourth of their teachers can meet the requirements of visual instruction since they are not skilled in the techniques of presentation, are unfamiliar with existing materials or the sources from which they are available, and lack the technical knowledge required to operate projection apparatus. As a result teachers are reluctant to attempt to enrich their class work through visual instruction.

Teachers use, on the average, about twenty-five visual units a year in city systems, with the elementary teachers using over four times as many items as the secondary teachers — high school teachers concentrate on the motion picture, which condition may account for the fact that the average movie film will be used some twenty-two times a year or just four times as often as most other visual items. It appears that either the elementary teachers are better trained in the values and techniques of visual instruction than secondary teachers or visual materials other than classroom movies, suitable to high school instruction, have not yet been produced in sufficient quantity to attract the secondary school teachers.

Administrators are unanimous in demanding that teacher training institutions provide instruction in the essentials of visual instruction for both the student and the employed teacher. Nearly two-thirds of the administrators would require of teachers in training a college course in visual techniques. Administrators show little faith in the ability of the average college instructor of methods courses to give the necessary instruction. A survey of the visual equipment owned by California teacher training institutions and a check of the teaching films secured by them from the Visual Center indicates that there is a basis for this skepticism.

There is little evidence that California institutions are concerned over the lack of training in this field that they are offering. Only one institution in California offered a summer session course in visual instruction in 1938, and not one provided a regular session course. On the other hand at least two eastern states require such a course for certification.

Library Association Announces Program

The School Library Association of California, Northern Section, announces the following program for the remainder of the present school year: March 1, an open Council meeting at Piedmont High School, the subject being "The Library in Relation to the Junior High School"; March 30, a "book brunch" and Council meeting at the Women's City Club, San Francisco; May 3, the annual spring meeting at Marin Junior College, Kentfield.

Officers of the association are as follows: president, Marguerite Grayson, High School of Commerce, San Francisco; vice-president, Florence Gardiner, San Leandro High School; secretary, Zelma Reeve, Richmond Union High School; treasurer, Maurice Hardin, University High School, Oakland; and director, Jessie Boyd, University High School, Oakland.

A Survey of Junior High Awarding Practices

By HELEN CONNON

Wishing to motivate participation in school activities and to stress pride in service, but hesitant about setting up a reward system with its attendant dangers, the faculty of the David Starr Jordan Junior High School in Palo Alto decided to investigate what other junior high schools are doing with regard to the problem of awards. Their findings, at least those which were secured by a questionnaire study, are reported in the present article.

Mrs. Connon has taught at Jordan Junior High for the past three years. At the present she is teaching mathematics, hygiene, and science. She was a member of the committee which made the study of awards, herself interpreting the returns and writing the committee's report. As a postscript to the article, Mrs. Connon adds this note of explanation of the use being made at Jordan of the results: "We now are attempting to build an awarding system which will answer our purposes and at the same time violate none of the precepts which we have learned from the literature and the survey to be the *sine qua non* of a successful awarding philosophy."

FEBRUARY finds Jordan Junior High School again electing student officers. During the early days of the 1940 campaign teacher interest was dormant, but when election day approached several of us awoke suddenly to face a most disconcerting fact. Two of the candidates for the school's highest office were "undesirable" and the third, a superior student, was kept from winning by his lack of popularity—that nebulous quality so important to the adolescent.

Because of a sincere desire to establish and maintain democratic student government, no restrictions other than that the candidate be a ninth grader "in good standing" had been placed on the office of student manager. It was hoped that real leaders and those who would develop into leaders would be drawn to all school offices by a natural desire to serve, but our bubble of idealism burst with a bang during that memorable 1940 campaign.

After the 1940 elections the sponsor of student government set about convincing certain capable students that the office was worthy of their efforts, and by dint of this sincerity and personal enthusiasm drew into the next campaign one fine boy who, combining the qualities of popularity and fitness for office, subsequently became student manager. However, this boy's reluctance to run for office, and the unwillingness of many other superior students to accept responsibilities, impressed us with the demanding necessity for a spirit of public service within the school and particularly among those students who have potentialities of leadership. Accordingly, a faculty committee was called together to consider the problem.

The conventionality of our own training led us quite naturally to consider how well the school population had been showing appreciation for services already rendered, and we found that no tangible acknowledgment had been forthcoming. We had pursued the "negative policy," punishing bad actions but

not calling attention to good ones. Perhaps, we thought, rewarding outstanding public service would provide our needed motivation. This led us to the fateful question: If we reward accomplishment in the field of participation, should we not reward accomplishments in other fields as well? Elaborate plans took form in our minds, and we brought ourselves up short one fine morning with the realization that we headed toward, not our original goal of *motivation,* but an entirely new goal of *reward* or *pay.*

We began to wonder how other junior high schools throughout the country had met this situation, for surely it was a common problem. We consulted current literature, finding in it assurance that we were not alone in our confusion. The controversial nature of the problem became increasingly evident. Shall we reward work well done, or shall we acclaim those students who serve so that others may know them during their period of service? What shall we recognize—only scholarship, or participation in school responsibilities, or citizenship? Or shall we consider combinations of these, or any number of other activities of junior high school students? Do all systems of awards tend to heap honors on those superiorly endowed, leaving the less fortunate bitterness instead of inspiration? What parent-school relationships result? Are the money, time, and energy spent in administering the system well invested? Is a recognition system a simulation of life situations? Can some sort of reward or distinction provide authentic motivation for public service, and does it result in developing desirable character traits?

TOWARD a satisfactory answer to these questions, as well as to gain an understanding of practices in this field in the United States, a faculty committee[1] prepared a questionnaire and sent it to 166 schools. Fifty-nine went to California schools, chosen at random except where a particularly successful or unusual system was known to be functioning. The remaining 107 were so divided that at least one went to each state outside California. An attempt was made to choose cities in which population number, proximity to a university or teachers' college, existence of only one junior high school, and so forth, might approach the conditions in Palo Alto.

A total of 66.8 per cent of the questionnaires were returned, and we have added data obtained from several schools to which questionnaires were not sent, so that the following results represent information from 114 schools in 35 states and in the District of Columbia.[2] Of these 114, two are combination junior-senior high schools, 13 are senior high schools, and 99 are junior high schools with seventh, eighth, and ninth grades only.

Responses to the questionnaires were tabulated, and results have been computed for the most part as percentages based on the total number of answers to a given question. For example, if of all the questionnaires returned fifty answers were given to a certain question, the actual percentage figure is obtained by reference to the fifty answers rather than to the total number of questionnaires returned.

In three pages of questions we attempted to gain a picture of the school set-up in each case. Therefore, we inquired about student government, enrollment, handbooks, radio, demerit systems, and counseling as well as about

1 Members of the faculty committee were Helen Whitney, mathematics, student finance, and government; Zoe Tiffany, English; Vernon Hurd, social living, student government; Daniel Stone, social living, student traffic organization; Helen Connon, science, radio.

2 States not represented are Arizona, Delaware, Florida, Idaho, Maine, Oklahoma, New Hampshire, New Jersey, New Mexico, Tennessee, Utah, Vermont, and West Virginia.

awards. These seemingly irrelevant data have provided much interesting information which, however, is not pertinent to the present report.

THE real question—Do you reward outstanding accomplishment among your students? — brought 110 direct answers. Eighty-three, or 75.5 per cent of the schools answered yes; 27, or 24.5 per cent, no. A number of those who do reward indicate dissatisfaction with the basic philosophy involved, or with their own methods in particular. Many of those who do not now reward have but recently discontinued the practice, and they generously indicated the chief causes of failure. These will be considered later.

Anxious to find some limit to the ever-widening horizons of *what* to reward or acknowledge, we asked about the degrees of emphasis placed on superiority in scholarship, athletics, citizenship, participation, attendance, and health, leaving a small space for others. These "others" overwhelmingly outnumbered the original six and include such activities as the following: social events, typing, music, service, banking, speech, journalism, traffic, drama, library, clubs, effort, creative work, efficiency, science, office work, community work (not associated with school), and any outstanding achievement. A few of these undoubtedly could be incorporated in the six stated activities, but others approach that point where every effort is rewarded. A tendency in that direction is to be noted in the literature as well as in several of the questionnaires, but on the other hand certain of the questionnaire replies indicated a general policy of contraction, with recognition in only one or two fields.

The following table shows the responses to the questionnaire in the matter of the degree of emphasis in selecting students to be rewarded. Percentages are in reference to the eighty-three cases reporting rewarding systems.

TABLE 1.—*Per Cent of Schools Replying Which Emphasize Various Factors as a Part of Their Reward System*

	Much Emphasis	No Emphasis	No Response
Scholarship	85.5	8.4	6.1
Athletics	66.2	18.1	15.7
Citizenship	66.2	3.6	30.2
Participation	62.7	10.8	26.5
Attendance	38.6	19.3	42.1
Health	22.9	31.3	45.8

The column of Table 1 which shows failure to respond may possibly be interpreted, because of the wording of the question, as indicating that the particular activity is not rewarded.

Superior scholarship is the most consistently rewarded item, which is in line with traditional practices. School has long been a place for mental development and academic attainment, whatever intrusions have been made recently by other less erudite activities. It is therefore appropriate to go a long way in acknowledging superiority in scholarship, if we are to reward anything at all.

Granting that we are going to "award," are our purposes best accomplished through an "honor" or "service" club, or by citation or recognition without an organization? Of those who laud pupil achievement, 64.5 per cent do so without an organization. Some hold assemblies at which students receive honorable mention, speak, or receive tangible reward. Others place the honored names on a permanent scroll in a conspicuous place in the school building, or upon a yearly honor roll, or in school and local newspapers. Still others merely make it possible for the student to obtain and wear a badge of honor, or a small pennant, ribbon, pin, shield,

sweater, ring, medal, letter, star, numeral, or other distinguishing insignia. In some schools, chiefly in the East, American Legion awards are given to the outstanding boy and girl of the graduating class. Other schools honor accomplishments with skating parties, barbecues, banquets, field trips, and the like. Some send the parents a letter of commendation from the school's principal. And some give money prizes.

Several of our responses told us in no uncertain manner that individual awards, such as those listed in the preceding paragraph, are productive of the most undesirable character traits. But some of the schools, while acknowledging that school work should be so set up that participation is warranted, not bought, feel that for the purpose of building good school spirit awards and recognitions to the group are satisfactory. The group award itself is limited to those items which may be shared by all members and includes school, grade, and activity pennants, banners, shields, letters, and so forth, as well as parties and other social events.

That there is a definite tendency toward group awards is undeniable, and, if the philosophy underlying the movement is sound, we may find the solution of many of our present problems in that direction. If we accept motivation to better work, recognition of good service, and the development of school spirit as the *raison d'etre* of any awards system, and these seem to be rather generally so accepted, then surely group awards will satisfy us in most important particulars.

TO return to the method of awarding—35.5 per cent of the reward systems reported function only through an honor or service club of some type. About one-fourth of these have one composite organization which recognizes all types of superior accomplishment; 78.1 per cent operate through numerous groups, one specializing in service, another in athletics, another in scholarship, and so on. A number of the latter, in eastern schools, are affiliated with the National Junior Honor Society.

These organizations are divisible into two types:

1. *Service Groups.* Students are elected to membership on more or less superior rating, usually not based on scholarship alone. A program of service to the school is carried out during the year. Very often members wear identifying insignia, which form their only tangible "reward." Service clubs offer an excellent opportunity for the use of group awards, but little advantage has been made of this to date.

2. *Honor Groups.* Superior students, usually those excelling along academic lines, are grouped together, allowed to wear an identifying pin or ring, allowed to render certain services to the school, and treated to a program based on educational pursuits or to such pleasures as trips or banquets.

The chief difference between the two groups lies in the attitude with which membership is accepted. In service groups a student expects to devote time to a "duty"—such as traffic regulation, library or office work, or grounds patrol. The reward comes from the feeling of a job well done. The insignia he wears points to his worthy contribution to the school. Quite opposed to this is the attitude towards the honor group member, who is honored because of superiority and who may in many cases serve or not, as he likes. He wears a distinguishing mark because he contributes well to his own accomplishment—a most selfish means.

WHETHER awards are made through an organization or otherwise, some means of rating and qualify-

ing students must be found. Approximately 50 per cent of the schools replying indicated that they use a point system—the basic plan of all being identical. Under these schemes a number of points is assigned arbitrarily to each service or activity, and students may pile up points by participating until the required number for recognition or membership, or both, has been accumulated.

Some systems make an attempt to distribute emphasis so that a "well-roundedness" results instead of over-specialization. In one junior high school the four fields stressed are scholarship, activity, health, and ethical character. Others emphasize what they call mental, social, physical, and moral efficiency —or physical, mental and spiritual development—but the goal of the "whole personality" is evident in all these plans. There are many schools, however, in which points may be accumulated in specialized fields without any distribution requirement, and these would seem to tend toward undue merit for those students superiorly endowed in one way or another.

Of the schools replying, 25.3 per cent indicated that qualification for rewards is based on faculty rating only, independent of any point system or student judgments, while 8.4 per cent allow qualification by student-faculty vote, either general or by committees. Other answers as to qualification methods are too fragmentary and varied to be of general value.

Cost, of importance in all school matters, is of particular interest in the matter of awards—for may not a better use be made of "rewarding" money? We asked for an estimate of the cost of each system to the student as well as to the particular school, and we found that there is little expenditure made by students unless they wish to purchase jewelry. Costs to schools vary from $250 per year, to none, but because of differences in enrollments, computation was made on a per capita per year cost basis. There is a range of from $0.15 to $0.006 per student where expenditures are made at all; 18.8 per cent of the schools report no expenditures. As may be seen, the variation is wide, and apparently cost is a problem based solely on individual circumstances.

WHAT evaluation can be made of each system? Would period of operation indicate the degree of success? Here, as in cost considerations, the range is wide—from twenty-four years in one instance to several less-than-a-month cases. As no significant correlations with other items can be made, length of time in operation has not been considered a valid criterion of success.

Of greater validity in evaluation is student and faculty opinion. We asked if the method in use is considered democratic in spirit and functioning. How this was determined by each school is not known, but a large percentage of the schools queried made reply. Their replies are indicated in Table 2.

TABLE 2.—*Attitude of Three School Groups Towards the Democracy of Reward Systems Functioning in Their Schools*

	Per Cent Considered Democratic	Per Cent Considered Not Democratic	Per Cent Questionable
Rewarded students	86.0	3.5	10.5
Student body (in general)	87.0	1.9	11.1
Faculty	88.5	1.6	9.9

Where a system of rewarding is in use, faculty and student opinion for the major part favors it, although indica-

tions of dissatisfaction are not lacking. From the criticisms of this dissatisfied minority and of those who have recently discontinued the practice, some of our most valuable information has been obtained. These latter tell us, "honor society discontinued — wrong emphasis and discontent"; "merit system and awards discontinued — motivation for rewards, not work at hand"; "ill feeling"; "emphasis not on intrinsic values, many physical and emotional upsets"; "few benefit but many hurt"; "disappointments — school-parent friction"; "too great strain at adolescent period"; "discontinued in eight-school system by faculty-student vote as being undemocratic"; "scholarship society not a true picture of superiority"; "artificial"; "impossible to rate fairly"; "too much bookkeeping with full teacher load"; "all honors and awards discontinued—pernicious and positively harmful!"

However, numerous schools report excellent results from awards systems. Current educational publications contain references to such favorable experiences, and these statements are borne out, in our study, by the fact that 59.7 per cent of those replying indicated that their systems are eminently successful in directing capable students toward school leadership, and an additional 35 per cent claim a fair degree of success.

CAN we now, in the light of the present report, find answer to the questions which instigated it? Shall we *reward,* or shall we *motivate?* A noticeable tendency exists to deëmphasize rewarding and to stress pride in service. Since the entire problem arose at Jordan Junior High School from the desire to foster a spirit of unselfishness and dedication to public service, we firmly believe that our particular situation will demand a system wherein the only basis is motivation to participation and the willing acceptance of responsibility.

What shall we recognize? The important objective of democratic distribution among students of varying abilities, not only of recognitions but also of responsibilities, must be kept constantly in mind. That an all-inclusive system is possible of accomplishment is witnessed by the enthusiastic indications of success in the literature and in our survey. Not all who try, however, succeed in attaining this ideal.

Which way shall *we* go? It is evident that no "one and only" way exists. We cannot reduce recognition or motivation to a formula, nor can we say that success in one school guarantees it in another. We must experiment. Current literature and this survey do, however, point to these common objectives: (1) legitimate motivation for participation in various activities; (2) democratic recognition of students of varying abilities; (3) all-around individual development; and (4) parent-school felicity.

Some schools successfully attain these ends without awards, others only by means of an extensive system of them. It is apparent that—in this field as in many others—"what's one man's meat is another's poison."

An Experiment in Photoplay Discrimination

A nation-wide experiment to determine the possibility of substituting older "A" pictures for current "B" pictures for use in schools and of using recommended older films for a planned series of student matinées, around which curriculum units in photoplay discrimination will be built, is being tried during the academic year 1940–41 under the auspices of the motion-picture committee of the National Education Association Department of Secondary Teachers.

A Service Club Sponsors a Vocation Day

By GRACE E. HARRIS

The "Vocation Day," which was held last year at the Taft Union High School and Junior College under the sponsorship of one of the local service clubs, was a day set aside for counseling of students by representatives from the business, industrial, and professional life of the community. As such, it helped the schools to know the community and the community to know the schools.

Miss Harris, who writes the article, is dean of girls and director of guidance at Taft. Before going to Taft, originally as a teacher of English and a counselor, she had been dean of girls at Paso Robles Union High School and had taught in other California high schools. Her chief interest, as we might expect, is in guidance.

IN a previous article[1] the writer made this statement: "Know your community." The converse may be stated to the community, "Know your school." An attempt was made to carry out the ideas of both of these statements at the recent Vocation Day held at the Taft Union High School and Junior College.

"Service clubs (such as Rotary, Kiwanis, Lions, and so forth) are always willing to lend a hand. They have committees for vocational guidance, juvenile welfare, health service, and civic welfare. . . . . The counselor can play a great part in harnessing their energies."[2] This was the approach we followed in bringing together our schools and community in a Vocation Day.

KIWANIS International has worked out, over a period of years, a program of vocational guidance and publishes, among others, the following pamphlets which are valuable in organizing a program for Vocation Day: *Kiwanis Vocational Guidance, Kiwanis Counselor's Handbook,* and *A Working Program of Vocational Guidance.* Last year the members of our local Kiwanis Club became interested in furthering their vocational guidance program. Their first move was a visit to the high school and junior college shops and classrooms. Next they invited leaders in school guidance, elementary and secondary, to explain at one of the weekly luncheons the aims, objectives, and philosophy of those departments. Other steps leading to Vocation Day included a utilization of the "big brother" idea and a scheduling of a series of vocational "pow wows." In other words, the Taft Kiwanis Club and the guidance department spent a year in becoming oriented.

At the beginning of the school year 1939-40, after all this preparation, both organizations were ready to do bigger things. At a joint meeting of the committees the idea of a Vocation Day was suggested. Vocation days, it may be stated, are annual events in many schools throughout the state, but, as far as we were able to determine, ours is the only one not sponsored entirely by the schools.

After correspondence with schools which had been successful in scheduling

[1] Harris, Grace E., "The School Counselor and the Community," *California Journal of Secondary Education,* 13: 358-363, October, 1938.

[2] *Ibid.*

such affairs we launched the plan. The idea was explained to each student and faculty member by means of a special bulletin, which also included a list of 110 occupations. Students were urged to take the lists home and to discuss them with their parents. They were encouraged to add occupations to the list if any were omitted in which they were interested. They were asked to indicate on an accompanying card five occupations which interested them, in the order of their preference. The survey then was tabulated, a conflict chart made, and a time schedule prepared. The results of the survey showed that there was a demand of ten or more students for sixty-six different occupations. An effort was made to limit sections to forty so that a spirit of informality would be present.

FINALLY, 106 sections were created, and 106 speakers were needed to lead these sections. The high school and junior college guidance committee, meeting with the Taft Kiwanis Club Vocational Guidance Committee, suggested the list of speakers to be invited. In many instances names of firms only were suggested, whereupon these organizations were approached and asked to recommend persons in their employ to speak to certain occupational groups. Kiwanis supplied many speaker counselors from their roster. Teachers also were encouraged to offer suggestions.

Invitations to speakers stated the plan for Vocation Day and stressed the fact that many students would be shopping for facts upon which to base vocational decisions. An outline for the vocational talk (covering the following points: status of occupation, preparation needed, nature of work, remuneration, and working conditions) was enclosed in each invitation, along with a page for publicity notes concerning the speaker and a card to be returned accepting or rejecting the invitation. The final count of speakers was eighty-nine, many speaking to more than one section.

People in the vocational world are, in many cases, very timid so far as their ability to speak before groups is concerned. Hence, much moral support was needed. The Kiwanis members furnished it, and many of the speakers came to us at the school for further reassurance. But what is more to the point—they came to the school at the designated time and led vocational sections which proved, according to student and faculty opinion, to be worthwhile.

AS soon as class rolls were prepared, individual schedule cards were made for each student. The school guidance committee then appointed student chairmen to take care of the following details: greet the speaker in the counseling room, act as host or hostess until time for the section to begin (seeing that the speaker was conducted on a tour of the campus, if time permitted), direct the speaker to the proper place, introduce him to the faculty member in charge and then to the group, conduct a discussion on student questions, and see that the speaker was returned to the counseling room after the section meeting. A general meeting of all student chairmen was called prior to Vocation Day at which certain cautions and suggestions were made.

Faculty members were assigned to sections, as far as possible according to their interests. There were several members present in each group, with one in charge. Faculty members were asked to keep groups running smoothly, to help in the discussion, to assist the speaker in feeling at ease, and to keep the speaker on the subject.

Counselors were to station themselves at the entrances to the main building and direct speakers to the counsel-

ing room and assist in many other ways during the day.

Student journalists, through the school paper, *The Gusher,* acted as publicity agents for the activities of the day and put out a special issue, which included a listing of vocational sections scheduled, personal notes on speakers, pictures of speakers, and so forth. As a part of the program, the student staff was given the privilege of editing the front page of the *Taft Daily Midway Driller.*

The day before Vocation Day, all students were issued a bulletin giving full instructions as to the procedure to be followed. Teachers were asked to read this bulletin aloud and to explain whenever necessary.

WHEN Vocation Day rolled around, we were ready to swing into action. Students reported to their homerooms for roll call and received a "Suggested Outline" for the vocational talk (identical with those given to the speakers) to stimulate their questions and a schedule of their sections for the day. Homerooms then were dismissed to the general assembly. Seated upon the stage during this event were people who had helped to put the plan into effect: the president of the Taft Kiwanis Club, the district superintendent of schools, the president of the board of trustees, the registrar, the director of guidance, and the presidents of the high school and junior college student bodies. Dr. Rufus V. von KleinSmid, president of the University of Southern California, delivered the address, "How to Choose a Vocation."

Since the auditorium of the Taft Union High School and Junior College is not large enough to house the entire student body, lower division students met in the auditorium of the grammar school in conjunction with the eighth graders to see a vocational film and to hear Major W. A. Cryderman, who is connected with the National Schools in Los Angeles. After the general meetings, students were dismissed to attend the various vocational sections.

Each speaker was directed to his counseling room, where he was introduced to the student chairman in charge. Three sections were held during the morning, and school closed on the basis of a half-day session.

Kiwanis held its weekly luncheon in the school cafeteria and invited guest speakers and faculty members to attend. Dr. von KleinSmid again was the featured speaker.

AS this article is being written, an evaluation of the day is being made through student, teacher, and speaker-counselor evaluation questionnaires. The results of these various questionnaires will be published at a later date.

Kiwanis truly sponsored the Vocation Day. The club helped to provide speakers and in many instances supplied the funds to pay speakers who came from out-of-town points.

Many townspeople saw the school for the first time that day, and many faculty members met townspeople for the first time. The twain, school and community, came together and both seemed to like the idea.

Allied Youth to Meet at Atlantic City Convention

Allied Youth, Inc.—a movement sponsored by the National Education Association to organize and serve youth-led, school-sponsored posts in communities throughout the United States in which students are helped to seek, classify, and discuss facts about alcohol and to promote their own alcohol-free recreational events—is to hold a dinner at the annual convention of the American Association of School Administrators in Atlantic City, February 24.

Safety Program of a High School District

By BEECHER W. FAWCETT

WHAT is "safety"? How can it be taught? These two questions so recently tossed into the curricular ring of the secondary schools have been and are causing much commotion. What are the answers? No one knows completely, but this article will express our conception of "safety" and explain what we of the Inglewood Union High School District are doing in teaching it.

We feel that we have made a satisfactory start, but we realize that the great bulk of the work remains to be done. We further realize that the measure of success attained has been due to the combined interest, work, and cooperation of administrators, teachers, custodians, students, and community, county, school, and other outside agencies. No program of this type can be successful without unified effort and recognized need.

For our purpose we have defined "safety" as not only protection from accident, but also protection from anything that might cause harm or injury to person or property. The general public is traffic-accident conscious, but few people realize the extent of home, industrial, and recreational fatalities and injuries. The school program must cover not only these, but also it must recognize the health and moral or character building needs of the school and community. The attitudes of parents, clubs, and community are extremely important, for the best of safety programs can largely be offset by exterior influences.

How can safety be taught? There is no definite answer. Each community faces different problems and, to be satisfactory, the safety offerings must spring from an analysis of the local situation. The work of our district has resulted from a felt need. Most teachers have too little time and opportunity to do personal research and build units of work in new fields. The objective of our efforts has been to find needs and provide readily available materials, specific content suggestions, procedures, and references valuable in correlating the teaching of safety with existent school subjects, with major emphasis on school safety at first.

FOR years our shops, science classes, and many other courses have taught safety measures appropriate to their

"I believe safety instruction is assured of a place of first importance in the curriculum of the future, that our greatest work lies in the field of human relations, and that only in the degree that we can direct the attitudes and activities of individuals in safer and saner living will our work be successful," writes Mr. Fawcett in explanation of the nature of the safety program that has been developed in the Inglewood Union High School District under his guidance.

Mr. Fawcett is chairman of the Science Department of Leuzinger High School and head of the safety work for the Inglewood District. Among his activities in the safety field have been the preparation of the Los Angeles County monograph for secondary schools, "Protecting Life, Health, and Property," and the writing of an M. S. thesis on a similar topic.

own work, but not until February, 1937, was an effort made to analyze school and local needs and build a unified program of safety instruction. At that time a committee composed of representatives from the administration, the shops, both boys' and girls' physical education, science, home economics, both cafeterias, general classrooms, the custodians, and a special department in charge of streets and parks near the school was appointed to study our safety problem.

For the remainder of the year the committee centered its activities around the following points:

1. To prevent accidents rather than cure injuries.
2. To find needs and analyze the then existent offerings in the light of these found needs.
3. To formulate a unified safety program in the light of found needs and integrate it with the existent curriculum, this program to provide for the attainment of knowledges and skills and the development of correct safety attitudes.
4. To make teachers and pupils "safety conscious," not alone in their school life, but also in their outside living.
5. To promote the doctrine of "safety through correct doing."
6. To determine what school accidents should be treated, when and by whom.
7. To determine which teachers should have safety kits and what size kits should be furnished.
8. To study means and methods of character education as a safeguard to health and the development of a better citizenry.

Needless to say, we are still working on these problems and will need to be ever alert to changing needs and circumstances. In our investigation, each member of the committee made a written and oral report on rules and regulations found of value in his or her department. These reports were discussed pro and con, added to, or cut occasionally; and many suggestions were made for further thought. In this way, the district safety offerings were broken down into rather large specifics that made clear the necessary instruction and duties of each department. Although many of the students are cared for in this way in many safety fields, we still feel that all students should have instruction of this type. Accordingly, this school year we are working on content for a core curriculum in which every student will participate.

In our first attempt to determine placement of safety content in classwork, the curricular offerings were divided in two groups:

1. Hazardous courses, or those in which elements of danger ordinarily exist.
2. Non-hazardous courses, those in which elements of danger do not ordinarily exist.

Hazardous courses include, among others, physical education, sciences, mechanical arts, home economics, art, music, and work on the stage and in plays. Non-hazardous courses include such courses as mathematics, English, social sciences, commercial subjects, foreign languages, and orientation.

HAZARDOUS courses through ever-present and felt needs establish rather definite and necessary safety instruction. Some folks may question the placing of music and art in this group until it is recalled that safety includes the protection of instruments; that players must step in and out of orchestra pits and climb stairs, often under crowded conditions; that bands march and play in the excitement of athletic contests with danger of tripping and overfatigue; that drum sticks and violin bows may put out eyes; that there is constant danger of transferring colds and other diseases by trading mouthpieces or reeds or "mouthing" another person's instrument; and that a horn blown loudly into another person's ear may cause deafness. In art we find that poisonous pigments can easily be absorbed into the body if students stick brushes in their mouths, that scaffolds are usually necessary for paint-

ing stage scenery, that some paints are poisonous to some people by skin contact, and that etching often is done with dangerous acids that give off dangerous fumes.

Our committees and teachers have worked up far too great a quantity of materials to be included in completion here, but as a further example of what we are doing let us now consider a few precautionary measures found valuable on the stage and in plays:

1. Handle the switchboard only after sufficient instruction, and then with supervision during the first times of operation.
2. Use only recommended fuses for particular parts of the wiring system.
3. Do not touch the wiring of radios, amplifiers, and public address systems without knowledge of the wiring. Failure to observe this rule may bring you into contact with several hundred volts of electricity, thus causing severe shock or burn and possible death; or the instrument worked with may be put out of commission.
4. Worn or frayed light cords constitute a shock and fire hazard. Replace worn cords with new ones. Never make repairs or adjustment of electrical wiring while the current is on.
5. Take your time in doing unfamiliar things.
6. Never use candles or uncovered flames on the stage or in plays.
7. Keep a woolen blanket on hand for smothering fires.
8. Have drapes and curtains fire-proofed.
9. Never handle curtain weights or work with curtains, drop lights, and the like without preparatory instruction and careful beginning supervision. A falling curtain weight might easily cause death.
10. Only selected students should be allowed to handle ladders. Such students should be ones not affected by height.
11. If stage balconies are used to facilitate lowering of curtains, for storage, or as props in plays, they must have safe railings.
12. All "cat-walks" must be substantial and have railings.
13. Scenery props should be well braced to prevent falling. Braces should not extend out so pupils will fall over them or otherwise run into them.
14. In painting stage scenery, care should be taken in the use of scaffolding and in handling poisonous paints.

The shops and mathematics and science courses are well adapted to the explanation of natural laws, the why and how of things. On the other hand, most non-hazardous courses present a splendid chance for explanation of the use and necessity of man-made laws in the regulation of human activities.

These latter courses have a distinct and definite obligation to develop school and home morale, school and home safety attitudes, and to furnish information and develop safety measures applicable to home, school, and public life. For example a few suggestions for safety instruction in the social sciences follow:

1. Include a separate unit on general safety in all United States history and civics courses. In this way, all graduating students come in contact with this safety instruction.
2. The development and history of transportation presents a splendid opportunity for inclusion of traffic hazards.
3. A health program may be based on the history of great plagues or diseases—such as those carried by polluted water supplies, rats, mosquitoes, flies, animals, and human beings.
4. Maps, charts, and tables may be used to show areas affected by past plagues, types of plagues, diseases and plagues of war times, and statistical data as to severity of plagues.
5. Traffic safety as a major problem can be discussed under such headings as:

   Dangerous intersections in the community.

   Traffic regulations and why they are necessary.

   Meaning of road signs, traffic signals, etc.

   Learning to drive.

   Statistics on traffic accidents.

   What constitutes a good driver? This will include knowledge of the car, laws, signs, and signals; attitudes toward others; physical qualifications; the danger from drinking drivers; and car upkeep.
6. Classes in American problems provide a fine opening for encouraging and demonstrating those higher ideals of living which will build better boys and girls for today and men and women for tomorrow.

Home safety should include a varied assortment of safety content. Home economics courses cover much of this material for many students, but there is a felt need for a wider spreading of

this knowledge. At Inglewood we hope to work this into our core curriculum, teaching it through English and Social Science courses.

AS stated before, the attitudes, cooperation, and interest of the community are all important in this work, affecting public life as it does. For this reason, we have carried our program to the community, asking how we can be of service.

Our committee has always met at dinner meetings. Last year at our second meeting, we had in attendance as guests the mayors of the two cities in our district, Hawthorne and Inglewood; two judges from Inglewood and one from Hawthorne; police chiefs, captains, and officers from both cities; a captain from the county sheriff's office; a representative from the County Juvenile Department; and the organizer and director of the Inglewood Boys' Bicycle Brigade. In addition, interested heads of departments and teachers were invited to attend. It is of interest to note that all guests insisted on paying for their own dinners, saying that the safety of the community is as much their problem as ours.

Subsequent meetings were held throughout the year, all with evident success. We gained many points through our exchange of ideas, especially along lines of traffic and community safety and character building programs.

The attempt has been made to make this article nontechnical, just a plain statement of some of the things we are doing. This year the chairman has one period to devote to safety work. We hope to refine and broaden our program until we know that every student has some in contact with educational influences that will lead him or her into a safer, more abundant life.

Extent of CCC Education

CCC education has directly served one of every seven young men in the United States within age limits of CCC enrollees, the CCC Camp Education Division has reported to United States Commissioner of Education John W. Studebaker. "Placing enrollees in useful jobs is the goal of our program," says Howard W. Oxley, CCC camp education director. "Intensive, practical training is the method. Courses vary from quarter to quarter in each camp, depending on employment needs of the community and aptitudes of enrollees."

Of 2,420,000 American youths who have been or are enrolled in the CCC, 90 per cent have participated voluntarily in educational activities carried on in camps and in coöperation with community schools or by correspondence or extension courses.

Educational activities of the CCC may be divided into four classifications: academic, vocational, avocational, and technical training relating to camp administration.

Vocational training led to placement of 47,186 enrollees in jobs during the 1940 fiscal year, Mr. Oxley reports. Through academic instruction nearly 5,000 enrollees earned grammar school diplomas; a thousand received high school diplomas, and almost a hundred were awarded college degrees. Academic courses stress raising the educational level of enrollees, with emphasis placed not on working for school credits but on eliminating shortcomings in the enrollee's basic education to strengthen his self-confidence and increase his ability to land and hold a job.

Current Research in the Field of Secondary Education

Reviewed by WILLIAM A. SMITH

Training of Teachers of New-Type Courses in Secondary Schools, by Golden Le Grand Woolf. Unpublished Doctor's Dissertation, University of California, Berkeley, 1940, viii + 283 pages. (L. A. Williams, sponsor.)

MASS education on the secondary school level and fundamental changes in our mode of life have brought with them educational problems the seriousness of which we are only just beginning to sense. The most crucial of these pivot, as might be expected, about the curriculum and the teacher. The formal academic curriculum, appropriate enough for the select few in another age, no longer functions as an adequate means to adjustment for the vast majority, and the teacher whose chief concern is the promotion of such a curriculum is as archaic. In response to this situation there have come into being almost over-night many and varied new-type courses as more adequate means to adjustment, and along with these has come an increasingly insistent demand for a type of teacher qualified to administer them.

Woolf set out "to develop, empirically, criteria as guides for the construction of teacher training programs for new-type courses." These courses, variously designated as new-type, trunk-line, fused, and core courses, are those developed and taught in the Coöperating Secondary Schools of California since 1934. They are in process of displacing uncoördinated subject-matter constants and deal with "such matters as: orientation within the school itself; social-living, including guidance, counseling, and socio-biological relationships; American history, including civics, and current affairs; health problems and the like."

The scope of the new-type teacher training program, as viewed by Woolf, extends over "both pre-service and in-service periods." The data, gathered mainly by means of check-lists, visits, and personal interviews, were secured from teachers and principals of the Co-operating Secondary Schools of California and from the Core-Curriculum Committee of the Association of California Secondary School Principals.

The teachers were asked to evaluate in "the light of their experience" with new-type courses the contributions to their equipment of subject-matter courses, the professional program, and nonschool training and experience; to estimate the relative emphases accorded essential activities in pre-service training and in new-type practice; and to offer suggestions regarding essential items to be included in a new-type teacher training program. The administrators were asked in "the light of their experience" to indicate the most essential and desirable characteristics of teachers of new-type courses, to state the needs of new-type teachers by way of in-service training, to enumerate the attempts actually made to meet the needs of such teachers, and to indicate verified pupil needs and the techniques employed in identifying them.

The teacher evaluation of subject-matter courses appears to have been ap-

preciably influenced by the areas covered by current new-type courses. In any event, English, the social sciences, psychology, art, and home economics received the highest ratings; the foreign languages, physical sciences, and physical education, average ratings; and mathematics, the lowest rating.

In evaluating the several courses comprising the professional training program, the teachers frequently showed keen discrimination, some being very hesitant to evaluate a course apart from the instructor. A final arrangement of the evaluations on an eight-point scale gives the courses in educational psychology and child study first place; those in secondary education, the curriculum, and practice teaching, second; and those in educational theory, third. History of education, special methods, and technical courses were accorded generally low ratings. The nonschool training and experience items rated as most valuable are travel, contact with occupations, participation in the work of social organizations with youth programs, hobbies and cultural pursuits, home and family life, and participation in community and civic affairs.

In estimating the relative emphases given essential activities, such as "participation in forming the school's educational philosophy," in pre-service training and new-type practice, the teachers' responses reveal a large overlapping in activities, but as a rule with much greater emphasis on activities in practice than in pre-service training. Teacher suggestions regarding essential items to be considered in planning new-type teacher training programs stress careful selection of candidates, provision for rich and varied experience beyond academic training, broad training in subject-matter fields, and a thoroughly functional and realistic professional program providing for sound philosophical and psychological orientation, a minimum of courses in education taught by competent instructors, and larger and more varied opportunities for directed pre-service practice.

Among the most important essential characteristics of new-type teachers stressed by the administrators are adaptability, approachability, breadth of interests, coöperativeness, dependability, good judgment, and so on.

Among major attempts made by administrators to meet the needs of new-type teachers are coöperative handling of specific problems by staff groups, coöperative solution of problems by inter-school groups, provision for staff contacts with life situations, well-planned institutes, and encouraging attendance at higher institutions. Verified pupil needs emphasized by the administrators are adjustments in group living, proper home adjustments, training in personal and family budgeting, practice in the social arts, assistance in developing social insights, sex and health education, tool masteries and training in study habits, and vocational orientation.

The list of criteria, formulated by Woolf on the strength of the data presented, features the following as highlights in new-type teacher training programs: (1) selection of candidates on the basis of personal qualities; (2) broad nonschool experience and contacts; (3) sound cultural orientation; (4) comprehensive subject-matter training; (5) thorough orientation in educational psychology and child study; (6) a sound philosophy of secondary education grounded in American ideals and needs; (7) abundant experience in translating the basic philosophy of education into practice involving: (a) identification of pupil needs, (b) setting up of objectives, (c) building curriculum units, (d) selecting appropriate teaching procedures, (e) guidance, and (f) evaluation; and (8) ample practice teaching under actual conditions.

What's Happening in California Secondary Schools

Edited by AUBREY A. DOUGLASS

San Diego Vocational Classes Expand Rapidly.—The San Diego Vocational School now offers courses of high school and junior college grade in fourteen different occupational fields. Evening classes are offered in fifty-five different subjects.

Those enrolled in evening classes are pursuing trade and business extension courses designed to prepare them for promotion or to increase their efficiency in their present employment. Part-time apprentice classes have been established in printing, carpentry, plumbing, electricity, meat cutting, and painting and decorating trades. Coöperative classes are being operated in retail selling. The enrollment in apprentice and coöperative classes is limited to junior employees in their respective occupations.

The enrollment has climbed steadily from 258 in day and evening classes in September, 1938, to 2,827 in April, 1940.

Over one thousand students have been placed in gainful employment this school year.

* * *

Long Beach Schools Sponsor a Vocational Conference.—A conference on "Youth and Work," held last spring in Long Beach, was sponsored jointly by the Long Beach City Schools and the Kiwanis Club. There were some fifty-eight section meetings where various lay people in the professions and occupations discussed questions of employment.

In commenting upon the conference, Principal John L. Lounsbury, of the Long Beach Junior College, says:

"A questionnaire was sent to all the graduating seniors in the high schools and the sophomores in the junior college in an effort to determine the vocational interests of the sixteen or eighteen hundred youngsters. These were compiled and gave the basis for the organization of the various sectional groups. Lists were compiled of the various occupations and industries in which an interest was shown as well as of the number who were interested in each one.

"Needless to say, a great deal of interest was shown on the part of the lay group, the school staff, and the students. I can say, from a personal standpoint, that I think it was a most worth-while meeting, but I would offer one criticism with which I think a great many people would agree. I think the conference came too late in the school life of the student. I think we should have such a conference for incoming freshmen in the junior college and for juniors in the senior high school. Those are the two periods when the matter of vocational choice should be called very forcibly to the attention of students."

* * *

Physical Education Featured at Contra Costa Meeting.—Competitive athletics and coeducational activities were among the pertinent problems of physical education in county elementary and secondary schools discussed at the joint meeting of the Contra Costa County School Principals and the

county unit of the Association for Health, Physical Education, and Recreation, held in Danville recently. Harold P. Hill of Brentwood and George Canrinus of Crockett are presidents of these groups.

Beginning with dinner at the San Ramon Valley Union High School Home Economics Building, the meeting continued in the high school auditorium. Ten-minute presentations of various phases of physical education were followed by open discussion led by Chairman George Canrinus. Topics and speakers were as follows:

Physical Education and the Classroom Teacher—Howard L. Johnston, principal, Excelsior.

Coeducational Activities in the Physical Education Program—Dorothy G. Webster, physical education supervisor, Richmond.

Competitive Athletics in the Elementary Physical Education Program—Harold J. De Fraga, principal, Ambrose.

The Place of Intramural Activities in a Physical Education Program—Karl O. Drexel, boys' physical education instructor, Martinez Junior High School.

Competitive Athletics in the Secondary Physical Education Program—George F. Creary, district superintendent, Antioch.

Recognition of problems that remain to be solved by administrators and physical educators was freely admitted.

* * *

Bureau of Homemaking Education Releases Enrollment Figures.—Maude I. Murchie, chief of the Bureau of Homemaking Education, reports that during the school year 1939-40, 515 vocational homemaking programs were maintained in 208 junior and senior high schools and in seven junior colleges. The enrollment in these programs was 11,642, of whom 236 were boys. During the year, thirty-two junior and senior high schools and two junior colleges organized programs for the first time.

Home projects carried on as learning situations in the normal family environment, an extension of the school instruction in homemaking, were as follows:

Type of Project	Number
Home Improvement (interior or exterior)	3,554
Provision of Food for the Family	6,449
Selection, Care, and Construction of Clothing	6,543
Laundering	1,155
Care and Guidance of Children	1,230
Health and Home Care of the Sick	1,449
Home Management	2,969
Consumer-Buying	1,126
Family and Social Relations	1,073
Related Subjects (art and science related to home)	500
Personal Improvement	2,766
Miscellaneous	308
Total	29,122

* * *

Trends in Science Enrollments.—The Committee on Science, which has been very active during the past year, has summarized trends in enrollments in this subject in senior and four-year high schools. Of 337 high schools outside the two largest cities, representing more than three-fourths of California high schools, 75 per cent offer general science in the ninth grade; 90 per cent place biology and chemistry in the tenth and eleventh grades; and 80 per cent offer physics in the twelfth grade. Advanced physical science, a combination of chemistry and physics, with applications to everyday living, is offered by about a fifth of these schools.

In 144 of the smaller high schools with enrollments of 250 or less, general science is provided in fewer than three-fourths, biology and chemistry in four-fifths, and physics in not quite two-thirds. Advanced physical science occurs in only a seventh of these schools. Four-fifths of 131 middle-size high schools with enrollments between 251 and 950 provide general science, nine-tenths provide biology and physics, and 95 per cent offer chemistry. Almost a quarter of this group of schools have

advanced physical science. The very large high schools with enrollments from 951 to more than three thousand offer general science less frequently but almost always provide the other three conventional sciences. Advanced physical science occurs in more than a third of the large schools.

Physiology, applied science, photography, and botany or zoölogy are offered by fewer than 10 per cent of the 337 high schools. Although these subjects are never offered by the very smallest high schools, they do not occur more frequently in the largest high schools than in the medium-sized. It seems that medium-sized high schools offer the widest variety of science courses for their pupils.

* * *

Conferences Discuss Giving Junior College Credit for NYA Work.—During recent months conferences have been held which were attended by representatives of the National Youth Administration and of the California junior colleges. The main theme of discussion, namely, the relation of work projects sponsored by the NYA to the school program, resulted in a discussion of credit for work in the junior colleges.

A committee, of which Dean Henry A. Cross of San Luis Obispo Junior College is chairman, was appointed by Rosco C. Ingalls, president of the California Federation of Junior Colleges, to examine and to make recommendations upon the question. Dean Cross secured from many persons their ideas upon this question and arranged a report indicating underlying philosophy and the problems and issues involved in awarding credit for work.

At a recent meeting of the committee, the following recommendations were made:

1. To receive credit, the youth must be enrolled in junior college.

2. The work experience must be definitely related to the in-school training and vocational plans of the youth. The committee believes that, "to be fully effective, work experience should be supplemented with related training" within the school but that the work experience and school training need not be concurrent.

3. It is very important that the work experience be set up on a job analysis basis to show the specific skills involved so that it can be accurately evaluated for credit.

4. School supervision is necessary both to the accrediting institution and to the youth. It is necessary to the school in order that the work experience may be related to the in-school training; and supervision is necessary to the desired progress and development of the youth. The type of supervision should vary with the individual student and his work assignment.

5. The school should attempt through its counseling and placement program to assist each student to work out the pattern which is best adapted to his interests, his ability, and his educational and vocational plans so that the work experience will fit into his whole scheme of training and work.

6. Until further experience has been obtained, the committee suggests that credit may be allowed on the basis of the present laboratory system, of one hour credit for three hours' work per semester.

* * *

Education and the Defense Program.—Late in June President Roosevelt signed an Act of Congress appropriating $15,000,000 for training in occupations necessary to the national defense. The act specified that the regular channels used for organizing federally-aided classes were to be utilized in the implementation of this program and that the standards for the operation of

federally-aided classes were to be maintained.

By the end of July over eighty thousand men had been enrolled in these courses. Two types of training were provided: preëmployment short courses, giving instruction in specific skills; and supplementary courses that aid workers on the job. Training was provided in blue print reading, lathe work, milling, chipping and filing, parachute-making, welding, riveting, tool-making, auto mechanics, aviation mechanics, pattern-making, drafting, electricity, radio, aviation sheet metal, foundry practice, and machine shop practice.

In local communities more than 1,300 advisory committees consisting of representatives of labor and industry worked with educational authorities in making local surveys of the supply of labor with relation to the needs of industry in their communities. These committees also determined the most satisfactory policies for operating vocational training programs.

On July 31, according to a news release from the National Office of Education, 3,500 men were enrolled in preemployment short unit courses in California, and 293 employed workers returned after work hours for additional training.

Civilian pilot training under the Civil Aeronautics Authority has not been a part of the above program. During the summer approximately forty institutions in California organized courses for civilian pilot training.

* * *

Representatives of Coöperating Schools Attend a Workshop.—Principals and representatives from California's coöperating schools attended a two weeks' workshop held at the Los Angeles City College, July 22 to August 2. Experiences over a five-year period in the development of a more adequate program for secondary education were pooled and analyzed. Summarizations were presented of common features of the core curriculum, of administrative practices, and of procedures in evaluation. These materials are now being edited for issuance as a bulletin to be distributed to high school principals throughout the State for faculty study, comment, and application.

* * *

School Traffic Program in East Los Angeles.—Officer G. W. Parker of the highway patrol in East Los Angeles has coöperated during the past with the Garfield High School in training pupils to be more alert to the seriousness of careless driving on the highways and the ever-increasing number of deaths caused through infractions of the traffic laws.

The following programs have been presented:

1. A motion picture on traffic violations on the highway.
2. A talk by an officer in uniform on the purpose of traffic regulations on the highway and their importance to safety.
3. A talk with slides regarding highway engineering and its significance in the elimination of death and accidents.
4. A demonstration with technical instruments showing the individual's reaction time as related to force and the laws of physics.

Principal Russell R. Peterson, Roosevelt Evening High School, Los Angeles, states that one of the most valuable points in Mr. Parker's program is that of creating a clinic where representatives of the highway department, teachers from the schools, and representatives from the business and service clubs may definitely plan for a more effective program in educating young drivers in highway safety.

* * *

Physical Education and Athletic Coaching Workshop.—California's first Physical Education and Athletic Coaching Workshop and School for High School Physical Education Men

was held in Monterey August 12 to 17, inclusive. It was the aim of the sponsors to make the offerings of this Workshop the broadest ever offered in any in-service training program of this type.

The subjects covered were Care and Prevention of Athletic Injuries; Football: Theory and Demonstration; Aquatics: Swimming, Diving; Tennis; Archery; Physical Education Program; Track and Field Athletics; Golf; Rules Interpretations; Basketball.

The Workshop was attended by nearly 150 high school physical education men. At the closing session these men voted unanimously to have another such Workshop conducted at the same time and place in 1941. It was indicated that the Monterey Board of Education would be willing to co-sponsor again such an undertaking. Also at the closing session the group voted unanimously to endorse the report of the National Preparedness Committee of the American Association for Health, Physical Education, and Recreation.

* * *

NYA to Build Aviation School at Sacramento.—The following statement, recently clipped from the Sacramento *Union*, describes an important development at the Grant Union High School, North Sacramento:

"The Sacramento *Union* has learned that $104,000 in federal funds have been allocated for construction of a building at Grant Union High School, where classes in the study of aviation instruments will be held under the auspices of the National Youth Administration.

"Wilfred Winkenbach, NYA supervisor for the Sacramento area and under whose direction the classes will be given, confirmed the allocation of funds but refused to disclose details of the project.

"Selection of Grant Union High School campus for construction of the building is believed to have been influenced by its proximity to the Sacramento Army Air Depot.

"The entire program of instructing young men in the use of aviation instruments would fit in with the nation-wide defense scheme.

"The classes also may provide instruction in the use of weather forecasting instruments.

"Construction of the building is to start immediately."

* * *

Oakland's Class in Repair Shop Mechanics.—Central Trade School, Oakland, operates a post high school trade and industrial training program. Although most enrolling students have graduated from high school and come to the trade school with a definite employment objective in mind, this is not true of all. Some who wish to enroll do not know the trade for which they are best adapted and yet are desirous of taking training in a trade. A department called Repair Shop Mechanics is operated for the dual purpose of handling these students and others who know what course they wish but are on the waiting list for a class which is full.

Principal A. E. Baker describes the Repair Shop Mechanics class as follows:

The class could be called a general shop, but its function is more specific than involved in such a title. It is designed to do four things:

1. *Establish in the student certain definite work habits.* This is accomplished by setting up situations in the shop procedure that will require careful attention to detail and systematic habits when handling work assignments. The traits of thoroughness and dependability are characteristic of competent tradesmen in any line of work and are as necessary to success as skill or knowledge.

2. *Give an opportunity to develop skill in*

the use of tools common to the wood and metal trades, with some knowledge of the materials used. The completion of type jobs will furnish opportunity for the student to develop basic skills, and the reference reading matter assigned with each job will give a working knowledge of materials used. The completed job is graded on four points: degree of accuracy, quality or finish, industry displayed on the job, attention paid to work procedure as set up for all jobs.

3. *Furnish means for the student to determine his fitness for a particular trade.* The degree of skill which the student is able to acquire and the ability to develop satisfactory work habits are the factors which will enable the student and the instructor to determine fitness. These factors are evaluated from data appearing on the completed job assignment card.

4. *Provide an opportunity for the adult past acceptable apprentice age to obtain training for employment as maintenance man.* The school training for the adult consists, first, of a study of the operation and maintenance of various types of heating and ventilating equipment through visits to places where such equipment is installed, talks by sales representatives, catalogues, various texts; second, of the repair of school equipment on assignment and the completion of type jobs. Repair jobs give a knowledge and proper use of tools and materials used in the building grades, in upholstery and furniture repair, and the construction and repair of small electrical appliances.

The jobs assigned involve certain definite skills with hard tools used in working wood and metal, and the instructions, in the form of a drawing with written directions, are set out on a "job sheet." All work is individual, and the job assignment is made on the basis of the need and capacity of the student involved.

The students in this class are specially selected high school graduates. The class presents an opportunity for the school to judge proper work attitudes and aptitudes before the student secures final enrollment in the class of his choice. It is not a reservoir class for students in other fields of training in the school who have poor work traits—these students are requested to withdraw from the school. It is in no sense a class for so-called "problem students" in other classes. Because of these conditions, the training program in this field has functioned very effectively in the "try-out" method.

* * *

Faculty Activities at Modoc Union High School.—In the Modoc Union High School, Alturas, Principal Harry F. Wandling is developing with his faculty the following activities:

Ninth-year pupils take English, homemaking (all girls), general science, agriculture, and frequently junior business training. A committee is considering how to utilize the fundamental operations in these courses. Pupils with deficiencies in a given skill will be given special work by teachers in these classes to develop more mastery. When the topic calls for a given arithmetical operation, as in agriculture or homemaking, pupils experiencing difficulty in that particular will be given supplementary teaching. Drills in specific operations will be introduced at such times. Every pupil has been tested to determine his skill in fundamental operations with integers, common fractions, and percentages.

Attention will be given also to pupils in upper years. It is hoped that proficiency in mathematics can be improved in chemistry and physics classes, for example, and in advanced shop classes, bookkeeping, and office practice. The hope is to show general, school-wide improvement during the year in all grades.

Instead of chronological history, pupils are studying history from the problem approach. Their first unit deals with reasons why peoples make wars—they refer to the wars in which the United States has engaged, from the

Revolution to the first World War. They study the causes of these wars and the effects they have had on population, food supply, industries, and American institutions. To secure material and report it, pupils are aided in English classes in practicing use of the library, use of the *Reader's Guide,* notetaking, outlining, panel discussion, reporting, and paragraphing. With few exceptions, pupils enrolled in United States history also are enrolled in English, so correlation is possible.

A faculty committee on safety, sanitation, and preservation of school property and equipment works with pupils, usually the Future Farmers and Block-M boys, to locate and correct dangerous and improper conditions about the school and to promote neatness among pupils with respect to disposal of wastes.

During the noon period and after school a program of games, dancing, and parties is being developed under the direction of Miss Mary Pronzato and Mrs. Madelon Carper. Instruction in dancing is offered boys and girls who wish to learn it. Pupils are learning how to conduct evening dances; their first venture revealed both capacities and weaknesses of pupil responsibility for admittance to these dances and for control of those attending.

The teachers of homemaking, agriculture, and sciences are studying problems common to a number of pupils, such as control of bad colds. After analysis of information needed by pupils, they make distribution in various classes of responsibility for proper action.

It is hoped to reinforce learning in these fields by having instruction conducted simultaneously or successively in several classes.

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Next Month

THE State Committee on Junior Colleges has conducted two major studies during the two or three years that it has been functioning. The first of these, a report of the Subcommittee on the Study of Personnel Work in California Junior Colleges, was published in the October JOURNAL. The second, that of the subcommittee charged with study of the curricula of California junior colleges, will be reported in the form of a symposium in the March issue of the JOURNAL.

These two symposia form a most significant commentary on the junior colleges of California, not only because they represent the most comprehensive commentary of recent years on this upper branch of the secondary school system but also because they report the self-survey which the junior colleges of the State have been undertaking and which should lead in the future to a more complete development of the junior college.

In charge of the March symposium are Dr. John W. Harbeson, principal of the Pasadena Junior College, and Dr. Nicholas Ricciardi, president of San Bernardino Valley District Junior College.

Other articles in this number of the JOURNAL will include an out-of-state contribution from Dr. Harold Fawcett, associate director of the University School of the Ohio State University, on the nature of proof. Dr. Wilbur E. Moser, principal of the Evening High School at Pittsburg, reports his study of how specialists in education stand in the matter of democracy in school administration when they are faced with specific functions on which to vote.

Miss Helen L. Growe of the Shasta Union High School reports a survey which she made of occupations open to girls in the community around Taft, California. From Delano Joint Union

High School comes a description by M. R. Petteys of the ninth grade orientation course. A comparison of what becomes of high school leaders and of nonleaders after they graduate is reported by John J. Crowley of the Riverside Evening High School.

New Books

SECONDARY school teachers in the English field will be interested in the following new books recently received from the publishers:

English in Action, by J. C. Tressler, D. C. Heath and Company, 1940. Course Three—price, $1.20; 432 pages. Course Four—price, $1.20; 423 pages.

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Modern Business English, by Roy Davis, Clarence H. Lingham, and William H. Stone. Ginn and Company, 1940. Price, $1.44; 516 pages.

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